Activity: Park Management Subactivity: Resource Stewardship

**Subactivity Summary** 

|  |                    |                     |  | FY 2007                     |                   |                                 |  |  |
|--|--------------------|---------------------|--|-----------------------------|-------------------|---------------------------------|--|--|
| Program Components                     | FY 2005<br>Enacted | FY 2006<br>Estimate | Fixed<br>Costs &<br>Related<br>Changes | Program<br>Changes<br>(+/-) | Budget<br>Request | Change<br>From<br>2006<br>(+/-) |  |  |
| Natural Resources Research<br>Support  | 9,250              | 9,508               | +105                                   | +28                         | 9,641             | +133                            |  |  |
| Natural Resources<br>Management        | 187,048            | 189,629             | +2,352                                 | +4,152                      | 196,133           | +6,504                          |  |  |
| Everglades Restoration and Research    | 10,531             | 9,746               | +83                                    | 0                           | 9,829             | +83                             |  |  |
| Cultural Resources Applied<br>Research | 18,382             | 18,328              | +290                                   | +921                        | 19,539            | +1,211                          |  |  |
| Cultural Resources<br>Management       | 76,344             | 78,027              | +1,316                                 | -217                        | 79,126            | +1,099                          |  |  |
| Resources Protection                   | 47,183             | 47,681              | +498                                   | 0                           | 48,179            | +498                            |  |  |
| Total Requirements                     | 348,738            | 352,919             | +4,644                                 | +4,884                      | 362,447           | +9,528                          |  |  |
| Total FTE Requirements                 | 2,695              | 2,726               | -5                                     | +20                         | 2,741             | +15                             |  |  |

Summary of FY 2007 Programmatic Changes for Resource Stewardship

| Request Component  | Amount | FTE | Page #  |
|--|--------|-----|---------|
| Programmatic Changes   |        |     |         |
| <ul> <li>Eliminate Support for Mammoth Cave Center for<br/>Science and Learning</li> </ul>     | -222   | -2  | ONPS-11 |
| Refine Visitor Services Survey   | +250   | +1  | ONPS-11 |
| Develop Air Tour Management Plans in<br>Partnership with FAA                                   | +2,402 | + 2 | ONPS-18 |
| <ul> <li>Complete Vital Signs Inventory and Monitoring<br/>Networks</li> </ul>                 | +1,000 | +8  | ONPS-18 |
| <ul> <li>Expand Exotic Species Management Teams in<br/>Three Target Areas</li> </ul>           | +750   | +4  | ONPS-19 |
| <ul> <li>Enhance Inventory and Monitoring of Historic<br/>Structures and Landscapes</li> </ul> | +1,000 | +10 | ONPS-38 |
| Reduce Support for Vanishing Treasures Initiative  | -296   | -3  | ONPS-38 |
| TOTAL, Program Changes   | +4,884 | +20 |         |
| Fixed Costs and Related Changes  | +4,644 | -5  | ONPS-5  |
| NET CHANGE   | +9,528 | +15 |         |

## **Mission Overview**

The Resource Stewardship Subactivity supports the NPS mission by contributing to two fundamental goals for the NPS: 1) Natural and cultural resources and associated values are protected, restored, and maintained in good condition and managed within their broader ecosystem and cultural context; and, 2) The NPS contributes to knowledge about natural and cultural resources and associated values so that

management decisions about resources and visitors are based on adequate scholarly and scientific information. These two goals directly support the Department of the Interior Strategic Plan goal to "Protect the Nation's natural, cultural and heritage resources."

## **Subactivity Overview**

As a steward of the Nation's natural and cultural heritage, the primary responsibility of the NPS is to preserve and protect park resources and values. To carry out this stewardship responsibility, the Service implements programs that encompass a broad range of research, operational, and educational activities. NPS inventories, evaluates, documents, preserves, protects, monitors, maintains, and interprets the natural and cultural resources at 388 park units and many affiliated areas. Park Service stewardship helps to perpetuate resources and allows for their continued appreciation, understanding, and enjoyment. Resource stewardship subactivities consist of the following areas of responsibility:

## **Natural Resources Stewardship**

- Obtains research support essential for managing the natural resources in our national parks.
  Supports parks by providing park and resource managers with knowledge gained through systematic,
  critical, intensive investigations involving theoretical, taxonomic, and experimental investigations or
  simulations, responsive technical assistance, continuing education for park personnel, and costeffective research programs that address complex landscape-level management issues. Partners
  include EPA, USGS, Cooperative Ecosystem Studies Units around the country, universities, and
  other Federal and State agencies.
- Manages the natural resources in the National Park System by protecting threatened and endangered species habitat, managing species of management concern, controlling exotic invasive plants and animals, restoring disturbed lands, and conducting tactical and other non-research studies to address natural resource operations needs. Conducts systematic inventorying of natural resources and monitoring of park vital signs through the organization of 32 multi-park geographic Inventory and Monitoring (I&M) Networks. Contribute to the preservation of natural scenery, wildlife, vegetation, air and water quality, geologic resources, and ecosystems.

## **Everglades Restoration and Research**

• Implements projects that are essential to the restoration of the natural ecological systems affecting Big Cypress NPres, Biscayne NP, and Everglades NP. Projects include feasibility studies, pilot projects for seepage management and in-ground reservoirs, and restoration projects.

# **Cultural Resources Stewardship**

- Conducts applied research aimed at preserving cultural resources. Provides detailed, systematic data about resources and their preservation and protection needs.
- Preserves and protects the sites, buildings, and objects that define our national heritage. Identify, document, and commemorate the people, events, and locations of that heritage. Covers prehistoric and historic archeological sites and structures, ethnographic resources, cultural landscapes, and all museum collections.

## **Resources Protection**

 Protects natural and cultural resources from deprivation due to intentional or unintended damage to resources. Includes protecting threatened and endangered species, archeological sites, historical sites, paleontological objects, and subsistence resources.

Subactivity: Resource Stewardship

Program Component: Natural Resources Research Support

# **Justification of 2007 Program Changes**

The 2007 budget request for the Natural Resource Research Support program is \$9.641 million and 62 FTE, a program change of +\$28,000 and -1 FTE from the 2006 level.

Eliminate Support for Mammoth Cave Center for Science and Learning: -\$0.222 million; -2.0 FTE Congress added funding to support the Mammoth Cave Center for Science and Learning in the FY 2006 appropriation. The NPS proposes eliminating support in FY 2007 in order to support higher priority needs. Program Performance Change: This proposed reduction will have no direct impact on NPS performance goals.

## Refine Visitor Services Survey: +\$0.250 million; +1.0 FTE

Funding is requested to strengthen the Service's capability to understand opinions about parks by expanding and refining the visitor services survey program. The public's (potential visitors and residents of communities near parks) attitudes about parks and specific park visitor preferences, experiences, and assessments of facilities and services, whether positive or negative, influence the development of park programs and services. To gain this knowledge, the NPS needs the capability to conduct a Comprehensive Survey of the American Public on a periodic basis, in-depth visitor surveys annually at a network of 20 to 30 indicator parks, and a slightly expanded version of the Visitor Survey Card at the remaining parks. These funds will allow the additional and expanded surveys to be conducted. This increase is supported by recommendations resulting from the Visitor Services PART Review. Program Performance Change: This proposed increase will not result in an immediate change in visitor satisfaction. With the additional knowledge gained from the survey, the NPS will be able to gain information about factors that impact visitor satisfaction.

# **Program Overview**

#### At A Glance...

## **Natural Resource Research Support**

- Addresses specific questions with immediate applications within the national park system.
- Longer-term research enhances overall understanding of specific park resources.
- NPS coordinates with the U.S. Geological Survey, particularly the Biological Resources Discipline, to obtain research needed by the NPS.

The Natural Resources Research Support program of the NPS supports the Department of the Interior's goal, "Protect the Nation's natural, cultural and heritage resources," through air quality research, cave research as well as providing enhanced technical assistance, education, training, and planning support to NPS managers.

Having useful, credible, and timely information is critical for making management decisions that have the potential to affect natural resources. Typically, parks do not have specific funds allocated for research, but may choose to fund

individual projects in any given year. Research needs, objectives, and priorities are included in the Resource Management Plans developed for each park. A small number of Servicewide activities, such as those that address air quality, have research components. Through the Natural Resource Challenge, the NPS has established innovative programs involving Cooperative Ecosystem Study Units and Research Learning Centers to coordinate logistical and other support for many research efforts.

Air Quality Research Activities: The primary emphasis of this program is on atmospheric visibility, a discipline not covered by the USGS/Biological Resources Discipline or not sufficiently covered by other Federal agencies. This research responds to statutory mandates to protect important scenic resources and other air quality related values in parks from impairment by air pollution and assists in meeting NPS responsibilities under the Clean Air Act. A significant portion of this effort is the acquisition of air quality research

#### Clean Air Act

# Class I Parks Criteria

- National Parks over 6,000 acres
- Wilderness Areas over 5,000 acres
- National Memorial Parks and International Parks existing on August 7, 1977

information in national parks, especially Class I parks and on the composition of particles in the air that cause visibility impairment. Environmental Protection Agency (EPA) regional haze regulations require States to make reasonable progress towards restoration of Class I area visibility to natural conditions over a sixty-year timeframe. Combined with research on the transport and transformation of air pollutants, these data help identify the regions and sources of the pollutants that cause visibility impairment in parks.

Additional investigations into the ecological effects of atmospheric pollutants on parks supplement these lines of research, including ecological indicators for the effects of air pollution on air quality related values under the Clean Air Act. The Western Airborne Contaminants Assessment Project (WACAP) was initiated in 2002 to determine the risk to ecosystems and food webs in western national parks from the long-range transport of airborne contaminants. The project was designed and implemented in cooperation with the EPA, U.S. Geological Survey, USDA Forest Service, Oregon State University, and University of Washington. Information about the ecological effects of atmospheric pollutants on parks assists States in complying with the Clean Air Act and assists the NPS in meeting the requirements of the NPS Organic Act and Wilderness Act. The NPS expects results to be available late in 2007.



Collection of WAPAC water samples in Denali NP for contaminant analysis. The NPS is concerned about airborne contaminants because they can pose serious health threats to wildlife and humans, as some of these compounds tend to bio-accumulate in the food chain.

(1) Find more information online about the results of air quality research activities at: http://www2.nature.nps.gov/air/Permits/ARIS/index.cfm

At A Glance...

# Cooperative Ecosystem Studies Units (CESUs)

CESUs support the DOI Strategic Goal – Protect the Nation's natural, cultural and heritage resources.

An NPS coordinator – a "science broker" – duty stationed at 12 of the 17 CESU host universities:

- Works with multiple parks and programs
- Identifies park research, technical assistance, and education needs
- Assists in finding project funding
- Locates specialized expertise available from more than 180 universities and other partners

Cooperative Ecosystem Studies Units: The NPS Cooperative Ecosystem Study Units (CESUs) directly supports DOI's goal, "Protect the Nation's natural, cultural and heritage resources," providing enhanced research, technical assistance, education, training, and planning support to NPS staff and managers. A network of 17 CESUs was established with leadership from the NPS, the U.S. Geological Survey, and other Federal agencies. These units are interdisciplinary, multi-agency partnerships organized into broad bio-geographic areas. Each unit includes a host university, additional university partners, other partners, and Federal agencies. Individual CESUs are part of a national network operating under a Memorandum of Understanding among 12 partner Federal agencies. This national network enables the NPS to collaborate with other Federal agencies and the Nation's academic institutions to obtain high-quality scientific information and attract expert researchers to use parks. CESUs provide usable knowledge for resource managers, responsive technical assistance to parks, continuing education for park personnel, and cost-effective

research programs. Benefits to the NPS include: a broadened scope of scientific services for park managers; enhanced collaboration and coordination among the NPS, other Federal agencies, and universities to address complex landscape-level management issues; enhanced technical assistance, education, training, and planning support to NPS managers; enhanced coordination across NPS program areas; and increased workforce diversity in NPS resource management.

The 17 CESUs focusing on broad ecosystems and providing complete coverage for the United States and its Territories are:

- California
- Chesapeake Watershed
- Colorado Plateau

- North Atlantic Coast
- North Atlantic Coast
- · Pacific Northwest (inc. southeast Alaska

- Desert Southwest
- Great Basin
- Great Lakes-Northern Forest
- Great Plains
- Gulf Coast
- Hawaii-Pacific Islands

- Piedmont-South Atlantic Coast
- Rocky Mountains
- South Florida/Caribbean
- Southern Appalachian Mountains
- Upper and Middle Mississippi Valley

① Find more information online about CESUs at http://www.cesu.org/index.html

Research Learning Centers: 15 Research Learning Centers provide infrastructural resources for researchers to conduct research and exchange information for their networks of parks. Center staffs and partners communicate key research outcomes on topics including coastal ecosystems, environmental history, cultural landscapes, fire ecology, and resource stewardship to participants. Each Center operates as a public-private partnership to optimize collaboration and leverage support needed to make scientific information available to park managers and the public.

The 15 current Research Learning Centers are the:

- Appalachian Highlands Science Learning Center Host Park: Great Smoky Mountains NP; serving 4 parks
- Atlantic Learning Center Host Park: Cape Cod NS; serving 3 parks
- California Mediterranean Research Learning Center (formerly the Southern California Coast Research Learning Center) - Host Park: Santa Monica Mountains NRA; serving 3 parks
- Continental Divide Research Learning Center Host Park: Rocky Mountain NP; serving 3 parks
- Crown of the Continent Research Learning Center Host Park: Glacier NP; serving 3 parks
- Great Lakes Research and Education Center Host Park: Indiana Dunes NL; serving 11 parks
- Jamaica Bay Institute Gateway NRA
- Mammoth Cave International Center for Science and Learning Host Park: Mammoth Cave NP; serving 4 parks
- Murie Science and Learning Center Host Park: Denali NP&Pres; serving 8 parks
- North Coast and Cascades Learning Network Host Park: North Cascades NP; serving 7 parks
- Ocean Alaska Science and Learning Center Host Park: Kenai Fiords NP: serving 5 parks
- Old-Growth Bottomland Forest Research and Education Center Host Park: Congaree NP; serving 18 parks
- Pacific Coast Science and Learning Center Host Park: Point Reyes NS; serving 3 parks
- Schoodic Education and Research Center Host Park: Acadia NP; serving 11 parks
- Urban Ecology Research and Learning Alliance Host Park: National Capital Region; serving 14 parks

① Find more information online about Research Learning Centers at http://www.nature.nps.gov/learningcenters/centers.cfm

Cave Research Program: In partnership with the State of New Mexico, through the New Mexico Institute of Mining and Technology, and the City of Carlsbad, New Mexico, the NPS jointly manages the National Cave and Karst Research Institute. Founded in response to Public Laws 101-578 and 105-325, the Institute's purpose is to facilitate speleological research, foster public education and awareness, and assist land managers dealing with cave and karst resources. The City of Carlsbad, working with the NPS, completed final plans for the Institute building and initiated the construction bidding process in 2005. Also in 2005, NPS negotiated an agreement with New Mexico Tech to take over the administrative management of the Institute and together they formed a non-profit corporation as legal home for the Institute.

#### **Learning Centers**

- A research/center coordinator and education specialist, often an interdisciplinary position, is located at each center
- Centers serve as focal points for research and information exchange for their park networks
- All centers leverage Federal funds with partnership sources
- At the beginning of FY 2006, a total of 15 centers have been established

① Find more information online about the National Cave and Karst Research Institute at <a href="http://www2.nature.nps.gov/nckri/">http://www2.nature.nps.gov/nckri/</a>

**Social Science Program:** Understanding the relationship between people and parks is critical for protecting resources and providing for public enjoyment. The Social Science Program conducts and facilitates research that provides public input into park planning and management; investigates economic interactions between parks and nearby communities; develops methods and techniques to improve management of visitor use; and supports improved NPS management. The public use statistics operation coordinates visitor-counting protocols Servicewide and provides visitation statistics for areas administered by the NPS. The program is the primary source of data to measure Servicewide GPRA goals related to visitor enjoyment, visitor understanding, and satisfaction with value received for entrance fees paid. The Social Science Program also provides research and technical assistance to park and program managers and to researchers. The University of Idaho Cooperative Park Studies Unit conducts an ongoing research project for the Social Science Program comprising several different studies. Through these in-depth Visitor Services Project studies, park managers obtain accurate information about visitors -- who they are, what they do, and their needs and opinions. Park managers continue to use the information from these studies to improve visitor services, protect resources and manage parks more efficiently.

## Use of Cost and Performance Information: Natural Resources Research Support

A recent pilot project at Fire Island National Seashore demonstrates how NPS programs can efficiently locate and secure the natural resource expertise required for specific planning needs of parks. The park is preparing a General Management Plan (GMP) due to be completed in 2007. A series of scientific



synthesis papers is needed to ensure that decisions affecting natural resource issues are well informed. Those decisions will include: establishing the desired conditions for the park's natural resources; establishing appropriate performance baselines and targets related to land health and managing biological communities; and, setting the stage for the park's resource stewardship strategies and activities for achieving park resource goals.

This pilot project demonstrates the enhanced efficiencies afforded through the Cooperative Ecosystem Studies Unit agreements with significant cost savings. The CESU's provide cost savings through their streamlined administrative processes

while also providing a diversity of scientific and scholarly expertise readily available through the CESU partners. The agreements provide for a pre-negotiated fixed overhead rate of 17.5% compared to an average 51.8% overhead rate charged by the top 100 universities.

Find more information online about the information produced through this project at http://www.ci.uri.edu/naccesu/CESU\_FIIS.htm

① Find more information online about Natural Resource Research Support programs at www.nature.nps.gov.

# **FY 2007 Program Performance Estimates**

The Natural Resource Research Support program component would continue to provide information essential to park managers for science-based natural resource stewardship decision-making and for the achievement and maintenance of natural resource desired conditions in parks. These research activities directly support the following NPS Strategic Goals:

• Improve the health of watersheds, landscapes, and marine resources managed by the NPS.

• Sustain biological communities on NPS managed and influenced lands and waters in a manner consistent with obligations regarding the allocation and use of water.

The information secured through research support normally precedes the associated activities under the Natural Resource Management program component by one or more fiscal years. The associated Natural Resource Management activities would produce measurable performance outcomes beginning in FY 2008.

The NPS secures the natural resource research support needed by parks through communication and coordination with the USGS and other agencies (e.g., active participation in annual USGS-hosted listening sessions with other DOI bureaus, regional NPS-USGS peer-to-peer meetings). The NPS also has access to the diverse range of national subject-matter expertise afforded through the 17 CESUs, 12 of which possess CESU Coordinators whose role includes ensuring the highest cost-efficiency of work performed by the CESU host and partner institutions. Where the expertise is not readily and cost-effectively available outside the NPS, the bureau provides natural resource research support through specialized staffing, interagency agreements, cooperative agreements, and intergovernmental personnel act appointments. Subject-matter expertise relating to statutory responsibilities (i.e., under the Clean Air Act) is normally addressed through NPS staff subject-matter specialists.

The following are examples of planned FY 2007 natural resource research support activities that will provide park managers with science-based information essential for decision-making to achieve and maintain natural resource desired conditions in parks:

- Assess the impact of mercury bioaccumulation in Cumberland Piedmont park units Year 1 of 3 (Mammoth Cave NP, Abraham Lincoln Birthplace NHS, Cumberland Gap NHP, and Big South Fork NR&RA)
- Determine critical nitrogen levels on plant growth, litter persistence, and germination Year 1 of 3 (Joshua Tree NP)

The following are examples of planned FY 2007 natural resource research support performance for the Social Science program that will provide park managers with accurate information about visitors, leading to improved visitor services, resource protection, and management of parks:

- Achieve customer satisfaction with the value for entrance fee paid at an estimated 92 percent.
- Conduct technical assistance for parks, including review of an estimated 75 to 85 survey submissions for NPS and OMB approval.
- Complete an estimated 8 to 12 Visitor Services Project studies (initiated in FY 2006) and deliver reports to parks. Initiate an estimated 8 to 12 new Visitor Services Project in-depth studies during FY 2007.
- Administer Visitor Survey Cards in an estimated 275 to 325 units of the National Park System to measure performance on GPRA goals related to visitor satisfaction, visitor understanding and appreciation, and satisfaction with value for entrance fee paid. Deliver reports on performance against these GPRA goals to parks, regional offices, and Washington offices.
- In cooperation with Michigan State University, continue to support the Money Generation Model measure of parks' economic impacts through 2006 and expand the model to include new impacts as sought by NPS management.

# **FY 2006 Planned Program Performance**

The following are examples of planned FY 2006 natural resource research support activities that will provide park managers with science-based information essential for decision-making to achieve and maintain natural resource desired conditions in parks:

- Assess current status of lichens and develop air quality biomonitoring protocol

  Year 1 of 2 (Klondike Gold Rush NHP)
- Assess affects of atmospheric nitrogen on alpine plants

   Year 1 of 2 (Grand Teton NP)

The following are examples of planned FY 2006 natural resource research support performance for the Social Science program that will provide park managers with accurate information about visitors, leading to improved visitor services, resource protection, and management of parks:



Conducting a Visitor Services Project in Yosemite NP.

- Improve the percentage of park managers satisfied with the improvement of the information base, information management and technical assistance, and science products for recreation purposes to an estimated 93 percent.
- Conduct technical assistance for parks, including review of 75 to 85 survey submissions for NPS and OMB approval.
- Complete 8 to 12 Visitor Services Project in-depth studies (initiated in FY 2005) and deliver reports to parks. Initiate 8 to 12 new Visitor Services Project in-depth studies during FY 2006.

# **FY 2005 Program Performance Accomplishments**

The following are examples of FY 2005 natural resource research support activities that provided park managers with science-based information essential for decision-making to achieve and maintain natural resource desired conditions in parks:

- Influence of sediment microbial community structure on mercury methylation – Year 1 of 2 (Congaree NP)
- Assess affects of atmospheric nitrogen on alpine plants
   – Year
   1 of 2 (Rocky Mountain NP)
- Santa Monica Mountains NRA developed and launched an online research prospectus, as part of its Mediterranean Coast Research and Learning Center Webpage, to connect academic research interests to research needs in the Santa Monica Mountains NRA, Channel Islands NPS, and Cabrillo NM



SCA interns engaging in natural resource research support activities Gateway

Working with NPS professional staff, eight Student Conservation Association interns at Gateway NRA
and other National Parks of New York Harbor worked on projects included monitoring salt marsh
restoration sites, exotic invasive vegetation control, vegetation surveys for rare and/or threatened and
endangered plants, GIS support for a myriad of activities, and bird surveys.

The following are examples of FY 2005 natural resource research support performance for the Social Science program that provided park managers with accurate information about visitors, leading to improved visitor services, resource protection, and management of parks:

- A baseline was established and data was collected for the goal of customer satisfaction with the value for entrance fee paid. The baseline and out-year performance targets were set at 92 percent.
- Conducted technical assistance for parks, including review of 83 survey submissions for NPS and OMB approval.
- Completed 11 Visitor Services Project in-depth studies (initiated in FY 2004) and delivered reports to parks. Initiated 11 new Visitor Services Project in-depth studies.
- Administered Visitor Survey Cards in 321 units of the National Park System to measure performance on GPRA goals related to visitor satisfaction, visitor understanding and appreciation, and satisfaction with value for entrance fee paid. Delivered reports to parks, regional offices, and Washington offices.
- Published the 11<sup>th</sup> annual customer service report, which includes customer service data from the Visitor Services Project in-depth studies and customer satisfaction surveys.
- In cooperation with Michigan State University, updated the Money Generation Model measure of park's economic impacts through 2004 and expanded the model to include impacts of park payroll expenditures on gateway economies.
- Expanded the Social Science Studies Collection of the NPS Focus Digital Library and Research Station to nearly 300 study reports and related items.

# **Performance Overview**

|  | The Overvie   |   | Change from 2005  | 2006                 | 2006<br>Change    | 2007                 | 2007<br>Change     |
|--|---|---|-------------------|----------------------|-------------------|----------------------|--------------------|
| Measures   | 2005 Plan   | 2005 Actual   | Plan              | Enacted              | from 2005         | Request              | from 2006          |
| Measures  Land Health Measures – Wetland, Stream & Riparian, Upland, Marine & Coastal, Water Quality, Water Quantity, and Air Quality (SP, BUR Ia1C, Ia1D, Ia1E, Ia1F, Ia3B, Ia3C, Ia4A, Ia4B, Ia4D) | No target. Information from research support provides diverse, essential outputs that are integrated into park manager decision- making on resource management strategies and adaptive management ; outcomes usually do not occur until several fiscal years later. | Information from research support addressed park-specific needs sought by park managers.                            |                   |                      | _                 |                      |                    |
| Sustain Biological Communities Measures – T&E Species, Species of Management Concern, Invasive Species (plant and animal), (SP, BUR Ia1B, Ia2A, Ia2B, Ia2C)  | Same as above.  | Information<br>from<br>research<br>support<br>addressed<br>park-specific<br>needs<br>sought by<br>park<br>managers. | Not applicable.   | Same as above.       | Not applicable.   | Same as above.       | Not<br>applicable. |
| Manager<br>satisfaction<br>scores for<br>technical<br>assistance<br>and science<br>products for<br>recreation<br>purposes<br>(SP, BUR<br>Ila11)  | 91%   | Not<br>measured<br>(no survey<br>conducted in<br>odd number<br>years)   | Not<br>applicable | Reporting suspended. | Not<br>applicable | Reporting suspended. | Not<br>applicable  |
| Customer<br>satisfaction<br>with the<br>value for fee<br>paid (SP,<br>BUR IIa12)   | Establish<br>baseline and<br>targets  | 92%   | Not<br>applicable | 92%                  | 0%                | 92%                  | 0%                 |

Subactivity: Resource Stewardship

Program Component: Natural Resources Management

# **Justification of 2007 Program Changes**

The 2007 budget request for the Natural Resources Management program is \$196.133 million and 1,408 FTE, a program change of \$4.152 million and 14 FTE from the 2006 level.

# Develop Air Tour Management Plans in Partnership with FAA: +\$2.402 million; 2.0 FTE

The FY 2007 budget proposal would provide an additional \$2.402 million and two FTE to comply with NPS responsibilities under the Air Tour Management Act of 2000. The Act requires that the NPS and the Federal Aviation Administration (FAA) work together to develop Air Tour Management Plans (ATMPs) for all parks with commercial air tours, in order to minimize or prevent significant adverse impacts. The ATMPs will determine if, when, or where commercial air tours will occur over NPS units, specifying flight routes, direction, minimum altitudes, time of day, and number of flights. Currently, commercial air tours affect 120 NPS units; however, additional parks would need ATMPs if an air tour operator requests to fly within half a mile of the park boundaries.

The ATMPs were to be completed within two years, but none have been completed as of early 2005. Per an MOU with FAA that was signed in January 2004, the NPS is committed to paying 40% of the ATMP costs. The FAA has requested funding every year since FY 2000 and has received and obligated more than \$20 million. To date, only \$500,000 has been appropriated to the NPS for ATMPs (in FY 2006).

So far, nine ATMPs are currently underway. Each plan and associated NEPA assessment takes one to two years to complete and costs approximately \$440,000. Substantial technical and planning assistance will need to be provided to parks in order to meet this schedule and fulfill statutory responsibilities. The ATMPs would be managed by the Natural Sounds Program, which has six permanent staff and a current base funding level of \$918,000. The additional two FTEs in this budget proposal would oversee contractor NEPA work, assist parks in acquiring acoustic data (beyond the 2-week monitoring period done by the contractors), negotiate ATMPs with the FAA, and provide scientific expertise for soundscape management. The NPS is working with the FAA to reduce the costs of air tour studies.

## Complete Vital Signs Inventory and Monitoring Networks: +\$1.000 million; +8.0 FTE

In an effort to provide effective resource stewardship through understanding species diversity, abundance and distribution, the NPS employs the resources of a Servicewide Inventory and Monitoring (I&M) Program at 270 parks. Monitoring NPS vital signs is essential to providing park managers with key information concerning the status and trends in park ecosystem health; defines normal limits of variation in measurable features; provides early warning of situations that require management intervention; suggests remedial treatments and frames each research hypothesis; and in some instances, determines compliance with laws and regulations. Inventory and monitoring components are integral parts of other programs, such as air quality and water resources.

The FY 2007 budget proposal would provide an additional \$1 million and eight FTE to fund the final two of the planned 32 networks for vital signs monitoring. These networks are:

# Chihuahuan Desert Network (6 parks)

- Amistad NRA
- Big Bend NP
- Carlsbad Caverns NP

- Fort Davis NHS
- Guadalupe Mountains NP
- White Sands NM

## Northern Great Plains Network (13 parks)

- Agate Fossil Beds NM
- Badlands NP
- Devils Tower NM
- Fort Laramie NHS
- Fort Union Trading Post NHS
- Jewel Cave NM
- Knife River Indian Villages NHS

- Missouri NRR
- Mount Rushmore NMem
- Niobrara NSR
- Scotts Bluff NM
- Theodore Roosevelt NP
- Wind Cave NP

The program strives to have identified the vital signs for natural resource monitoring in all 270 parks, and to have implemented vital signs monitoring in about 80 percent of parks with significant natural resources by the end of FY 2008. The data gathered through this comprehensive effort will improve the capabilities of the NPS to make sound policy and budget allocation decisions and achieve desired performance results.

# Expand Exotic Species Management Teams in Three Target Areas: +\$0.750 million; +4.0 FTE

The FY 2007 budget proposal would provide an additional \$0.750 million and four FTE for three Exotic Plant Management Teams (EPMTs) in support of their continued progress in containing exotic plant damage (a cross-cutting DOI bureau goal). The requested funding is part of the DOI-proposed cross-cut budget for invasive species management, which addresses the severe damages invasive species cause to natural resources and the economy. The NPS has developed a successful and unique invasive species management tool: the rapid response Exotic Plant Management Teams. Sixteen mobile EPMTs have been deployed to identify, control, and measure performance of control actions of non-native vegetation in many parks. The proposed funding would provide \$250,000 additionally to support each of the three EPMTs focused on DOI priority areas: the Florida EPMT, which targets lygodium; the Great Plains EPMT, which targets leafy spurge; and the Rio Grande Valley EPMT, which targets tamarisk.

| Total Performance C   | +20 Park vital signs identification supported<br>+1,915 Invasive plant acres contained |                |  |               |                |  |
|---|--|----------------|--|---------------|----------------|--|
|   | <u>A</u>   | <u>B</u>       | <u>C</u>                                     | <u>D= B+C</u> | <u>E</u>       |  |
|   | Overall  | Performance Ch | anges from 2006                              | to 2007       |                |  |
|   | 2006<br>Enacted  | 2007 Base      | Out-year Impact<br>of 2007 Program<br>Change |               |                |  |
| Measure   | Performance  | Performance    | Performance                                  | Performance   | on Performance |  |
| Vital Signs Identification (BUR Ib3A, PART)                             | 240  | 252            | +18 parks                                    | 270           | 0              |  |
| Acres of invasive plants<br>controlled (SP, BUR Ia1B,<br>PART)          | 8,000  | 8,000          | + 1,915                                      | 9,915         | + 1,915        |  |
| EPMT average cost of treating an acre disturbed by exotic plants (PART) | \$640  | \$640          | 0  | \$640         | Unk            |  |

Column B: The net performance change expected in 2007 from 2006 levels except for that resulting from the proposed program change; examples include impact of prior year funding changes, management efficiencies, absorption of fixed costs, and trend impacts.

Column E: The out-year impact is the change in performance level expected in 2008 and Beyond of ONLY the requested program budget change; it does <u>not</u> include the impact of receiving these funds again in a subsequent outyear.

# **Program Overview**

#### At A Glance...

## Natural Resource Basic Data Sets

- Bibliographies
- Species Lists
- Biological Inventories
- Base Cartography Data
- Vegetation and Land Cover Maps
- Soils Maps
- Geologic Maps
- Water Quality Data
- Water Resources Location
- Air Quality Stations
- Air Quality Data
- Meteorological Data

The Natural Resource Management program of the National Park Service supports DOI's goal, "Protect the Nation's natural, cultural and heritage resources." The NPS actively manages natural resources in the National Park System to meet its statutory responsibility to preserve these resources unimpaired for future generations. The Natural Resource Management program is the principle means through which the NPS improves the health of watersheds, landscapes, and marine and costal resources, and sustains biological communities on the lands and waters in parks. This program relates directly to the accomplishment of DOI and NPS strategic goals.

The National Park Service conducts natural resource management largely at the park level, utilizing park personnel and contractor support. Centralized or team-based subject-matter specialists also provide park managers with cost-effective scientific support,

specialized expertise, and technical assistance on a wide range of air, sound, water, geologic, and biologic park resource management needs, including science-based decision-making support and problem resolution. Park managers develop and use Resource Management Plans that define the park's natural (and cultural) resource management programs and serve as a blueprint for the comprehensive management of resources necessary to comply with the NPS Organic Act.

Natural Resource Preservation Program (NRPP). A limited number of project programs are available to conduct natural resource stewardship work in parks on a non-recurring basis. Most prominently, the Natural Resource Preservation Program provides the major Servicewide source of funds dedicated to park natural resource management projects. This Servicewide program provides the only reliable and dedicated funding for park natural resource management projects beyond the funding capabilities of the parks themselves. Parks have come to rely upon the NRPP in order to accomplish their highest priority project needs designed to achieve and maintain the desired conditions specified for their natural

resources. Consequently, the NRPP is a central component of NPS performance strategies designed to improve the health of the watersheds, landscapes, and marine resources it manages.

Inventory and Monitoring Program (I&M). The NPS administers a Servicewide Inventory and Monitoring Program that addresses the natural resource inventory and monitoring needs of 270 parks. The NPS also has inventory and monitoring components as part of other natural resource stewardship activities, such as air quality and water resources, that are coordinated and integrated for cost-effectiveness and efficiency.

Inventory information is an essential component to understanding species diversity, abundance, and distribution in order to provide effective resource stewardship. The NPS has identified 12 basic data sets as containing the minimum common scientific information necessary to manage park natural resources. In addition, the NPS has organized these parks into 32 geographic networks to conduct systematic identification and monitoring of vital signs (measurable features of the environment identified for each unique network) to provide an indication of the health of park ecosystems in a clear, straightforward manner. NPS vital signs monitoring is designed to provide park managers with key science-based information on the status and trends in park ecosystem health; define the normal limits of variation in measurable features; provide early warning of situations that require management intervention; suggest remedial

#### At A Glance...

# Park-specific Vital Signs from the Heartland Network

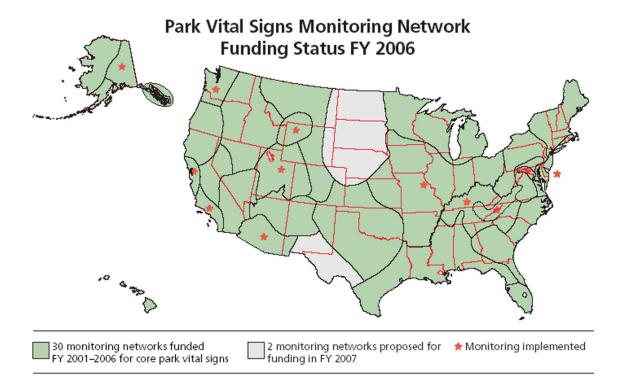
Wilson's Creek NB

- Stream Habitat / Riparian Assessment
- Core Water Quality Parameters
- Aquatic Invertebrates
- Exotic forest plants
- Exotic grassland plants
- Prairie community structure, composition, diversity
- Forest community structure, composition, diversity
- Dee
- Missouri bladderpod
- Land cover / Land use

#### Tallgrass Prairie NM

- Core Water Quality Parameters
- Exotic forest plants
- Exotic grassland plants
- Prairie community structure, composition, diversity
- Fish Communities Prairie Streams
- Landbirds
- Topeka shiner

treatments and frame research hypotheses; and in some cases determine compliance with laws and regulations.



Natural Resource Preservation Activities. The NPS actively manages natural resources in the National Park System to meet its statutory responsibility to preserve these resources unimpaired. Natural resource preservation activities are primarily funded and undertaken at the park level with additional funding and technical assistance support for actions beyond park capabilities provided through regional or Servicewide programs. Park managers perform a range of management activities designed to preserve natural resources through science-based restoration, rehabilitation, control, and mitigation activities to achieve and maintain natural resource desired conditions, improve the health of the watersheds, landscapes, and marine resources managed by the NPS, and sustain biological communities on the lands and waters in parks.

Parks must determine appropriate levels and types of visitor use and permitted activities such as fishing, river use, backcountry use, and hunting. Parks must evaluate, plan, and design the appropriate type, location, and level of activities that can be conducted without impairing resources. This often results in the development of a management or operations plan that utilizes an environmental assessment to evaluate alternatives and needed mitigation. These plans rely heavily on coalescing information from various sources, especially from the developing NPS I&M Program.

Visibility in parks is one of three key performance indicators the NPS uses to assess accomplishments towards one of its long-term strategic goals. The NPS, EPA, and States maintain a network of over 170 fine particle samplers; 50 of these samplers monitor park air quality. The NPS also operates a network of more than 60 ambient air quality-monitoring sites in units of the national park system to determine other key air quality performance indicators: ozone, sulfur, nitrogen, and ammonium deposition. The parameters that are currently measured by the NPS include ozone, dry deposition as part of the Clean Air Status and Trends Network (CASTNet), and wet deposition as part of the National Atmospheric Deposition Program/National Trends Network (NADP/NTN), as well as particle and optical monitoring in cooperation with the Interagency Monitoring of Protected Visual Environments (IMPROVE) program.

**Biological Resources Management:** The NPS has an extensive program to preserve native species and manage exotic species in parks where park managers and staffs are provided assistance in addressing technically complex native species management needs requiring the application of scientific knowledge and involving legal or policy related guidance. Exotic species occur in nearly all parks. Exotic



Results of invasive plant control work on leafy spurge by the Northern Great Plains EPMT at Theodore Roosevelt NP (before treatment above; post-treatment below).



species, especially invasive exotic species, adversely affect other species that are native to the parks, including threatened or endangered species. Exotic Plant Management Teams (EPMTs) serve 209 parks over a broad geographic area and work to identify, develop, conduct, and evaluate invasive exotic species removal projects. The NPS is using various approaches to control invasive exotic species populations in parks and to protect sensitive resources from destruction by invasive exotic species, including integrated pest management supported by current scientific information and best management practices.

The NPS is an active participant with other DOI performance budget bureaus in interagency approaches to high priority invasive exotic species being coordinated by the National Invasive Species Council (NISC). These performance budgets link spending levels with levels of performance. The interagency nature of the performance budget means that agencies have agreed to work together to achieve common goals and strategies, with success defined in terms of mutually agreed upon performance measures. Beginning in FY 2004, the NISC identified a number of topical and geographic areas to receive focused interagency attention. Of these, NPS participated in activities to mitigate the spread of yellow starthistle and leafy spurge in the Great Plains, tamarisk in the Southwest, and Brazilian pepper in Florida.

The NPS is continuing its expanded efforts to manage wildlife diseases, having assembled a Wildlife Health Team to assist parks with Chronic Wasting Disease (CWD) surveillance and management. CWD is a prion-caused disease that is fatal to deer and elk. Because the management of wildlife diseases requires a landscape or regional perspective, NPS is working closely with affected States to ensure a unified, consistent approach to the management of CWD.

Beginning in FY 2006, NPS wildlife health technicians instituted early detection mortality and morbidity surveys in selected Alaskan parks in response to the threat of the spread of Highly Pathenogenic Avian Influenza (HPAI), a non-native disease posing a potentially serious health hazard to park visitors, NPS employees, and native bird populations through bird-to-human or bird-to-bird transmission. The appearance of HPAI was projected to occur through contact between wild populations of Asiatic and North American migratory waterfowl sharing nesting and foraging habitats in Alaska, and, once the disease appeared in Alaska, it would subsequently spread into the contiguous 48 states with the annual southerly migration of infected native waterfowl. The NPS is working in close collaboration with the FWS, USGS-BRD, and other Federal and State agencies in this coordinated early detection effort.

The NPS also protects park natural resources from adverse impacts associated with past, current, and future mineral development in and adjacent to parks. In parks where mineral development activity is authorized, the NPS must approve formal plans incorporating appropriate resource protection and

# At A Glance...

#### **Preservation Activities**

Parks contain many examples of watersheds, landscapes, and marine resources disturbed by past human activity or other adverse influences that require:

- Restoring disturbed lands associated with abandoned roads and mines.
- Protecting wildlife habitat threatened by changes in water flow or quality such as prairies and wetlands.
- Controlling exotic plant species that impact native vegetation and wildlife habitat.
- Restoring fire effects to fire-dependent vegetation and wildlife habitat where natural fire regimes have been disrupted.
- Providing special protection of threatened and endangered plants and animals populations at risk.
- Perpetuating karst cave geologic processes and features by protecting groundwater quality.
- Managing marine fisheries to protect coral reefs and reef fish populations.

mitigation measures prior to commencing mineral development. NPS lands contain nearly 750 active private mineral exploration or development operations in 25 parks, most involving the production of oil and gas. Abandoned mining, and oil and gas exploration and production sites represent a substantial portion of the disturbed lands requiring restoration in parks. The NPS currently has an estimated 3,000 abandoned mineral lands sites with more than 11,000 hazardous openings, and over thirty miles of streams with degraded water quality associated with these sites, and more than 33,000 acres of disturbed land.

Air Quality: A potential external threat to park natural resources is the construction of new major sources of air pollution; particularly those capable of affecting NPS units designated as Class I areas. The NPS reviews permit applications for new sources of air pollution, actively works with permittees, and assists States with permitting processes to reduce the levels of air pollution from these sources and mitigate potential adverse effects on park resources. This includes working with other Federal land managers (e.g., USFS, FWS) to provide consistent guidance to permit applicants and to identify pollutant levels of concern.

Natural Sounds: The natural sound condition or acoustic environment of a park is the aggregate of all sounds that occur, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive, and can be transmitted through air, water, or solid materials. As an intrinsic physical element of the environment, noise can impact both park resources and visitor experiences, making noise management is an integral component of overall park management. Natural sounds can be intrinsic physical elements of the environment that are sometimes integral to park values, purposes, and visitor enjoyment. The NPS protects, maintains, and wherever possible, restores the natural sound conditions in parks impacted by inappropriate or excessive undesirable human-caused sound sources. Inappropriate and intrusive sounds are a matter of concern to both the preservation of natural resources and to visitors to national parks. Increasingly, natural sounds are being masked or obscured by a wide variety of human activities. One aspect of the activities resulting in intrusive sounds involves commercial air tours over parks. The NPS continues to work in cooperation with the Federal Aviation Administration (FAA) to manage air tours over national parks pursuant to the National Parks Air Tour Management Act of 2000 (P.L. 106-181). Joint development of an air tour management plan (ATMP) for each park where overflights occur is being pursued by the NPS and the FAA, who are working cooperatively on a joint public planning process that will analyze alternative commercial air tour proposals and their impacts on park purpose, resources, and visitor experiences.

**Geologic Resources:** Geologic features and processes are key influences on both the health of park watersheds, landscapes, and marine resources, and the NPS's ability to sustain biological communities on the lands and waters it manages. Geologic features and processes form the foundation for park ecosystems; and the NPS protects these features and processes ensure the achievement of natural resource desired conditions in parks. The NPS provides park managers with scientific information and technical support in a range of areas including disturbed land restoration; mitigation of geologic hazards (e.g., rockfalls, landslides, debris flows); geologic resource inventory and monitoring; and planning that integrates geologic features and processes (e.g., cave and karst systems, fossils, and coastal shorelines).

Water Resources: The NPS protects, secures, and manages water resources, both fresh and marine, and watersheds as necessary to preserve park natural resources. It also works to restore water conditions to meet park-desired conditions, including applicable Clean Water Act standards, and to ensure that water is available to meet visitor and administrative needs. Park managers are provided

assistance to ensure the consistent application of laws and regulations throughout the National Park System and to develop technical information so that management decision-making is based on sound science. Aquatic resource professionals assist parks in addressing their management needs, including water resource management planning, identification and prioritization of protection and restoration projects, development of needed water-related scientific information, aquatic resource restoration projects, and participation in legal or administrative processes. The NPS works closely with the States on the application of the Clean Water Act to protect water quality in parks and conducts water quality monitoring on selected water bodies. The NPS participates in State water rights administrative and court processes and seeks to negotiate resolution of issues with the States and other parties. NPS also works to assess, protect, and restore upland, coastal, and marine watershed conditions; floodplain, stream, wetland, and riparian resources; and fresh water and marine fisheries.

Environmental Response, Damage Assessment and Restoration: The Natural Resources Environmental Response, Damage Assessment and Restoration program (formerly Oil Pollution program) is authorized under the Park System Resources Protection Act (16 U.S.C. 19jj), the Oil Pollution Act of 1990 (OPA), the Clean Water Act (CWA) as amended by OPA, and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). This program provides assistance to parks in emergency response actions to address oil and hazardous substance releases, assessing resource damages resulting from third party actions, including those caused by oil spills or hazardous substance releases, and in the preparation of restoration plans to repair resources damaged by these unplanned incidents. This program serves as the basis for cost recovery actions against responsible parties who cause injury to park resources. Under these authorities, the NPS also takes actions to protect park resources from further injury following any incident. When incidents involve the release of oil or hazardous chemicals from sources outside the park, the actions must be consistent with the Department of Homeland Defense National Response Plan, Emergency Support Function 10 and the National Oil and Hazardous Substances Pollution Contingency Plan. Costs incurred by the agency for these actions are also recoverable under these laws and damage assessments conducted to determine natural resource injuries and restoration requirements must follow applicable regulations established as part of the Secretary's natural resource trust responsibilities under Federal law.

i Find more information about Natural Resources Management programs at www.nature.nps.gov.

# **FY 2007 Program Performance Estimates**

# The following are targets for NPS Strategic Goals:

- Establish initial baselines for land health goals.
- An estimated 10 additional acres of parklands degraded by past mining will be reclaimed or mitigated.
- An estimated 140 additional miles of streams and rivers will meet State and Federal water quality standards.
- An estimated 38,120 additional acres of lake, reservoir, estuary and marine waters will meet the State and Federal water quality standards.
- Eight additional management plans (actions, decisions, agreements) that protect or restore water quantity in surface and ground-water systems managed or influenced by the NPS will be completed.
- An estimated 2% additional Class I DOI lands will have stable or improved air quality.
- The NPS will maintain the number of Class 1 parks meeting National Ambient Air Quality Standards (NAAQS) at FY 2006 levels.
- The NPS will maintain the number of Class 1 parks whose air quality has achieved visibility objectives at FY 2006 levels.
- An estimated 2,100 additional acres of disturbed lands will be restored.
- An estimated 9,915 additional acres of invasive exotic plants will be controlled.
- An estimated six additional Federally listed T&E species that occur or have occurred in parks will make progress towards recovery.
- An estimated 14 additional populations of native plant and animal species of management concern will be managed, in cooperation with affected States and others, to a self-sustaining condition.

- An estimated 10 additional populations of invasive animal populations will be controlled.
- An estimated 33 additional paleontological localities will be in good condition.
- An estimated 203 additional inventories of park natural resource data sets will be completed.
- An estimated 30 additional parks will have their vital signs identified.
- An estimated 22 additional parks will have begun vital signs monitoring programs.
- The target for the average cost per acre for EPMTs to control invasive exotic plants is \$650 per acre (excluding all costs relating to the Florida EPMT beginning in FY 2005). FY 2007 may not see a continuing increase in the efficiency measure if funding requested to address invasive plants in three new geographic areas is provided; new invasive plant control treatments in these areas may eventually contribute lower costs as new significant readily accessible and comparatively dense populations of invasive plants are treated.

# Status of other PART and Strategic Goals:

- The measure of "Parks with Ecosystems in Good or Fair Condition" was added in FY 2006 as a result of the PART review of the Natural Resource Stewardship Program to report the current condition of park ecosystem health based on vital signs monitoring information. Statistically credible information on park ecosystem conditions from vital signs monitoring data will not be available until FYs 2009-2012. This information must be available to evaluate methodologies for integration and qualitative categorization of park ecosystem condition, which precludes adoption of this goal for FY 2007.
- Goals for "Land Health in Wetlands, Stream and Riparian Areas, Uplands, and Marine and Coastal Areas" were added in FY 2004. Relatively few parks will be able to adopt these outcome goals for FY 2007 because of the issues outlined for this goal in the FY 2006 Program Performance Estimates section below. In the interim, the few individual parks possessing all three of the elements needed for the land health goal will be able to establish their baselines, adopt these goals, and potentially develop performance targets and report results for FY 2007.

# Other planned program performance includes:

- Use wetland environmental histories to develop management strategies at Saint Croix NSR.
- Protect mine roosts of endangered Lesser Long-Nosed Bats at Coronado NMem.
- Develop techniques to restore tropical savanna grasslands at War in the Pacific NHP.
- Assess and map the distribution of submerged aquatic vegetation communities at Jean Lafitte NHP&Pres.
- Assess status of native bull trout and cutthroat trout populations at Mount Rainier NP.
- Determine seasonal movements, habitat use, and abundance of piping plovers at Padre Island NS.
- Quantify change in the old-growth forests at Congaree NP.
- Conduct hydrologic assessment of Ebey's Prairie at Ebey's Landing NHR.
- Assess effects of the invasive New Zealand mudsnail on the Federal candidate threatened Jackson Lake springsnail at Grand Teton NP.
- Begin recovery of Mauna Loa silversword in park addition at Hawaii Volcanoes NP.
- Recurring funding in the amount of \$500,000 will be used from the Natural Resource Preservation Program (NRPP) for the Yellowstone Grizzly Coordinating Committee (YGCC) to contribute to the Final Conservation Strategy for the greater Yellowstone Grizzly Bear population. This committee is a coalition of Yellowstone and Grand Teton National Parks, United States Geological Survey, Fish and Wildlife Service, US Forest Service, and the States of Idaho, Wyoming, and Montana. The committee works together to find intersection in the missions of their agencies and opportunities of cooperative management of resources, to enhance public service and to maintain or enhance the integrity of the Greater Yellowstone Area. The committee will work collaboratively to determine the distribution of the funding among the partners to facilitate research and management practices to support the conservation of the grizzly bear population.
- As a member of the National Invasive Species Council, the NPS will devote \$250,000 to treat each of
  the following invasive species: 600 acres of yellow starthistle and leafy spurge in Theodore Roosevelt
  NP and Badlands NP; 250 acres of tamarisk in Big Bend NP; and 1,000 acres of Old World and
  Japanese climbing fern, and Brazilian pepper in Everglades NP.

# **FY 2006 Planned Program Performance**

# The following are targets for NPS Strategic Goals:

- Establish initial baselines for land health goals.
- An estimated 17 additional acres of parklands degraded by past mining will be reclaimed or mitigated.
- An estimated 252 additional miles of streams and rivers will meet State and Federal water quality standards.
- An estimated 3,890 additional acres of lake, reservoir, estuary and marine waters will meet the State and Federal water quality standards.
- Seven additional management plans (actions, decisions, agreements) that protect or restore water quantity in surface and ground-water systems managed or influenced by the NPS will be completed.
- Changes to the EPA guidance on calculating visibility impairment are expected in 2006 and will affect
  the calculation of the goal measure percentage for air quality, ambient air quality, and air visibility in
  Class I parks. The FY 2006 to FY 2008 annual targets for these measures have not been revised at
  this time.
- An estimated 1,680 additional acres of disturbed lands will be restored.
- An estimated 8,000 additional acres of invasive exotic plants will be controlled.
- An estimated seven additional Federally listed T&E species that occur or have occurred in parks will
  make progress towards recovery.
- An estimated 362 out of a total 739 species of special concern will be managed to a self-sustaining condition. The decrease in performance from FY 2005 to FY 2006 can be attributed to species being shifted from the "self-sustaining" category to the "species of concern" category as more scientific data about the species becomes available.
- An estimated 10 additional populations of invasive animal populations will be controlled.
- An estimated 36 additional paleontological localities will be in good condition.
- An estimated 181 additional inventories of park natural resource data sets will be completed.
- An estimated 18 additional parks will have their vital signs identified.
- An estimated 49 additional parks will have begun vital signs monitoring programs.
- In FY 2006, the average cost per acre for EPMTs to control invasive exotic plants is estimated to be \$645 per acre (excluding all costs relating to the Florida EPMT beginning in FY 2005). FY 2006 may be the first year where cost per acre begins to increase as the earlier efficiencies of the EPMTs begin to be offset by the increased costs of controlling invasive plant populations in more remote locations and widely dispersed populations than in previous FYs.

## Status of other PART and Strategic Goals:

- Goals for "Land Health in Wetlands, Stream and Riparian Areas, Uplands, and Marine and Coastal Areas" were added in FY 2004. Relatively few parks will be able to adopt these outcome goals for FY 2006 because they lack one or more of the three elements necessary to do so. A Servicewide strategy is currently underway to assist parks by: 1.) providing parks with guidance on identifying their mapping needs and funding strategies they can pursue to complete this mapping; 2.) working with DOI on alternatives to specific identification of desired conditions in management plans, which are rarely present (i.e., an interim function-based desired condition); and 3.) investigating adoption of pertinent information from the watershed condition assessment program's work and the natural resource information syntheses being performed as part of the I&M Network monitoring. In the interim, the few individual parks possessing all three of the elements needed for these goals will be able to establish their baselines, adopt these goals, and potentially develop performance targets and report results for FY 2006.
- The measure of "Parks with Ecosystems in Good or Fair Condition" was added in FY 2006 as a result of the PART review of the Natural Resource Stewardship Program to report the current condition of park ecosystem health based on vital signs monitoring information. Statistically credible information on park ecosystem conditions from vital signs monitoring data will not be available until FYs 2009-2012. This information must be available to evaluate methodologies for integration and qualitative categorization of park ecosystem condition, which precludes adoption of this goal for FY 2006.

## Other planned program performance includes:

- Restore riparian and wetland habitat and eradicate pepperweed at Santa Monica Mountains NRA.
- Assess the potential for heavy metal bioaccumulation in terrestrial biota at Bering Land Bridge NPres, Cape Krusenstern NM, Kobuk Valley NP, and Noatak NPres.
- Perform reclamation of the Lincoln Cirque Mining Exploration Area at Great Basin NP.
- Characterize rocky intertidal shorelines at newly acquired navy base lands at Acadia NP.
- Conserve the declining Yellowstone pronghorn population at Yellowstone NP.
- Control exotic plants in a biologically sensitive riparian habitat at Big South Fork NR&RA.
- Study stock status and population biology of the Copper River steelhead at Wrangell-St. Elias NP&Pres.
- Determine black bear harvest mortality at Pictured Rocks NL.
- Inventory and plan for threatened dwarf-flowering heartleaf (Hexastylis naniflora) at Cowpens NB.
- Conserve threatened and endangered sea turtles at Biscayne NP.

# **FY 2005 Program Performance Accomplishments**

# The following are accomplishments on NPS Strategic Goals:

- The goal for restoration of lands disturbed by past mining was 300 acres. The actual number of acres
  restored (50 acres) was significantly below the performance target. However, a data quality problem
  may have occurred when parks projected targets and reported actual results between this goal and
  the "Restoration of Disturbed Lands" goal, which reported more than 170 acres restored beyond its
  FY 2005 target.
- By having a cumulative 136,228 miles of streams and rivers meet State and Federal water quality standards, the NPS missed its FY 2005 target by only 172 miles.
- By having a cumulative 3,674,690 acres of lake, reservoir, estuary and marine waters meet State and Federal water quality standards, the NPS exceeded its FY 2005 target by 23,690 miles.
- By completing a cumulative 30 management plans (actions, decisions, agreements) that protect or restore water quantity in surface and ground-water systems managed or influenced by the NPS, the NPS exceeded its FY 2005 target.
- By achieving stable or improved air quality in 68% of Class I parks, the NPS exceeded its target.
- By meeting National Ambient Air Quality Standards at 35 Class I parks, the NPS exceeded its target.
- By achieving air quality visibility objectives at 26 Class I parks, the NPS exceeded its target.
- The goal for restoration of disturbed lands was 8,700 cumulative acres (2,270 acres in FY 2005). The actual number of acres restored was 8,870 acres –170 acres above the performance target. However, a data quality problem may have occurred when parks projected targets and reported actual results between this goal and the "Restoration of Lands Disturbed by Past Mining" goal, which reported a 250 acre shortfall from its FY 2005 target.
- By achieving a cumulative total of 51,464 acres of invasive exotic plants controlled, the NPS exceeded its FY 2005 target by 1,964 acres.
- By having a cumulative 435 T&E species that occur or have occurred in parks make progress toward recovery, the NPS exceeded its FY 2005 target.
- By managing a cumulative 416 out of 739 species of special concern to a self-sustaining condition, the NPS exceeded its target for FY 2005 by 134 species.
- The NPS controlled a cumulative 61 invasive animal populations. This goal was new in FY 2005 so no targets were established.
- By having a cumulative 1,199 paleontological localities in good condition, the NPS came within 1% of its target.
- By completing a cumulative 1,761 natural resources data sets, the NPS came well within 1% of its FY 2005 target.
- By identifying vital signs in 222 of 270 participating parks, the NPS exceeded its FY 2005 target by six parks.
- By initiating monitoring programs at 104 of 270 participating parks, the NPS exceeded its target by three parks.

• In FY 2005, the initial target for average cost per acre for EPMTs to control invasive exotic plants was \$440 per acre. During the year, the costs associated with the Florida EPMT were excluded from this calculation at OMB's request and an interim revised average cost target of \$550 per acre was adopted. The actual average cost for FY 2005 was \$637 per acre, substantially higher than the interim target adopted following limited analysis. The actual cost information for FY 2005 was subsequently analyzed and used to revise the target values for FY 2006 and beyond.

# Status of other PART and Strategic Goals:

- The Natural Resource Stewardship program received another PART review for the FY 2005 budget request and improved its score by 11% from the previous year.
- Goals for "Land Health in Wetlands, Stream and Riparian Areas, Uplands, and Marine and Coastal Areas" were added in FY 2004. Relatively few parks were to able to adopt this outcome goal for FY 2005 because they lack one or more of the three elements necessary to do so: accurate baseline information, desired conditions specified in a management plan, and sufficient science-based information through which to assess current condition relative to desired condition. In FY 2005, the Natural Resource Management program initiated an assessment of the scope of these limitations as they affected the ability of parks to adopt these goals.

# Other program accomplishments include the following NRPP Projects:

- Evaluated campsites to predict bear-human conflicts and bear displacement potential at Glacier Bay NP&Pres.
- Monitored for chronic wasting disease at Wind Cave NP.
- Reintroduced the island fox on San Miguel and Santa Rosa Islands at Channel Islands NP.
- Prevented miconia invasion from displacing the Haleakala rainforest at Haleakala NP.
- Performed acoustic monitoring of the natural soundscape at Canyonlands NP.
- Studied boat wake impacts and their role in shore erosion processes at Boston Harbor Islands NRA.
- Re-established, stabilized, and managed 19 populations of Greenback Cutthroat Trout at Rocky Mountain NP.
- Restored springs on Navajo Point at Glen Canyon NRA.
- Assessed the occurrence, dissipation, and potential risks of the herbicide glyphosate to coastal areas at Biscayne NP.
- Developed Invasive Plant Management Plans and map exotic plants at Boston Harbor Islands NRA.

## Other program accomplishments include the following Park Base Funded Projects:

- Treated 60 acres to control invasive plant phragmites at Colonial NHP.
- Partnered with the local Audubon Society to conduct a migratory bird count at Fort Pulaski NM.
- In order to protect the genetic integrity of native plant populations, Grand Teton NP converted to a practice of using only locally collected or propagated seed for all re-vegetation projects.
- Effectively control an exotic and destructive animal population by removing 225 European wild hogs at Great Smoky Mountains NP.



In an effort to protect the Hawaiian Goose (nene), which is federally listed endangered species, a number of predators were trapped this year.

- Treated more than 120 acres of exotic Kahili ginger to prevent its widespread establishment in the native forest at Hawaii Volcanoes NP. Following eradication of the Kahili ginger, native trees, ferns and understory plants regenerated vigorously.
- Hawaii Volcanoes NP refocused the nene recovery program toward habitat management and predator control in an attempt to improve self-sustainability of the wild population.
- At New River Gorge NR, Gauley River NRA, and Bluestone NSR, 40 water quality stations were monitored for fecal coliform and E coli bacteria along with other water quality parameters.

- Padre Island NS restored 14 acres of disturbed land at Bird Island Basin and reestablished surface hydrology, allowing water flow from Laguna Madre to a large wetland that had become isolated by road construction in the 1980's. In addition, sea turtle hatchlings from 42 nests from the Texas coast were released at the Seashore. Ten of the hatchling releases were open to the public and media.
- Sitka NHP approached intertidal monitoring of the park's marine resources on three fronts. First, the park developed intertidal monitoring protocols in cooperation with the USGS for establishing baseline conditions and long-term monitoring. Secondly, by using Coastal Cluster funds to support eelgrass bed and marine invertebrate monitoring,



Intertidal monitoring at Sitka NHP.

the park began establishing biological indicators of ecosystem health to help determine impacts over time. Finally, the park worked with the University of British Columbia to continue marine algae studies linked to ecosystem changes and bio-geographical distribution.

#### **Performance Overview**

NOTE: This table does not include any proposed goal and measure changes resulting from the DOI Strategic Plan update now underway. See Performance Summary Tab for details.

Performance is cumulative unless noted otherwise.

|  |  |  | Change            | 0000   | 2006              | 0007   | 2007              |
|--|--|--|-------------------|--|-------------------|--|-------------------|
| Measure  | 2005 Plan  | 2005 Actual  | from 2005<br>Plan | 2006<br>Enacted  | Change from 2005  | 2007<br>Request  | Change from 2006  |
| Land Health – Wetlands, Stream & Riparian, Upland, Marine & Coastal (SP, BUR Ia1C, Ia1D, Ia1E, Ia1F) | No target.<br>Work with<br>parks to<br>assess<br>resources | Resource<br>assessment<br>ongoing.                                       | Not<br>applicable | Establish initial baselines. Review available data and continue resource assessments | Not<br>applicable | Establish initial targets. Review available data and continue resource assessments | Not<br>applicable |
| Land Health  – Mined lands (SP, BUR la1G)  | 300 acres  | ESTIMATED:<br>100 acres<br>ACTUAL:<br>50 acres                           | - 250             | 67 acres   | + 17              | 77 acres   | + 10              |
| Water quality - streams and rivers (SP, PART, BUR la4A and Ila7)                                     | 136,400 of<br>138,000<br>miles of<br>rivers and<br>streams | ESTIMATED:<br>136,400 of<br>138,000 miles<br>ACTUAL:<br>136,228          | - 172             | 136,480<br>miles   | + 252             | 136,620<br>miles   | + 140             |
| Water quality – lakes and reservoirs (SP, BUR la4B)  | 3,651,000<br>of<br>4,765,000<br>acres                      | ESTIMATED:<br>3,651,000 of<br>4,765,000<br>acres<br>ACTUAL:<br>3,674,690 | + 23,690          | 3,678,580<br>acres   | + 3,890           | 3,716,700<br>acres   | + 38,120          |
| Water<br>quantity (SP,<br>BUR Ia4D)  | 22   | ESTIMATED:<br>22<br>ACTUAL:<br>30  | + 8               | 37   | + 7               | 45   | + 8               |
| Air quality in<br>parks (BUR<br>la3A) 1  | 64%  | 68%  | + 4%              | 66%  | - 2%              | 68%  | + 2%              |

| Magazira   | 2005 Dlan   | 2005 Actual  | Change<br>from 2005<br>Plan | 2006<br>Enested | 2006<br>Change   | 2007          | 2007<br>Change |
|--|---|--|-----------------------------|-----------------|------------------|---------------|----------------|
| Ambient air quality standards in parks (SP, BUR Ia3B) 1                        | 2005 Plan<br>27 of 36   | ESTIMATED:<br>27 of 36<br>ACTUAL:<br>35 of 45                    | + 8                         | Enacted 28      | from 2005<br>- 7 | Request<br>28 | from 2006<br>0 |
| Air visibility<br>objectives<br>(SP, BUR<br>la3C) <sup>1</sup>                 | 22 of 26  | ESTIMATED:<br>22 of 26<br>ACTUAL:<br>26 of 26                    | + 4                         | 23              | - 3              | 23            | 0              |
| Restoration<br>of disturbed<br>lands (PART,<br>BUR Ia1A)                       | 8,700 acres   | 8,870 acres<br>(2,270 in FY<br>2005)                             | +170                        | 10,550 acres    | + 1,680          | 12,650 acres  | + 2,100        |
| Invasive<br>plants<br>controlled<br>(SP, PART,<br>BUR Ia1B)                    | 8,000 acres<br>(49,500<br>cumulative<br>of 2.6<br>million<br>acres) | ESTIMATED:<br>49,500 acres<br>ACTUAL:<br>51,464                  | + 1,964                     | 59,464 acres    | + 8,000          | 69,379 acres  | + 9,915        |
| T&E species<br>making<br>progress<br>toward<br>recovery<br>(PART, BUR<br>Ia2A) | 430 of<br>1,042   | 435 of 1,042   | + 5                         | 442             | +7               | 448           | + 6            |
| Species of<br>Special<br>Management<br>Concern<br>(SP, BUR<br>Ia2B)            | 282 of 602  | ESTIMATED:<br>282 of 602<br>ACTUAL:<br>416 of 739                | + 134                       | 362             | - 54             | 376           | + 14           |
| Invasive<br>animals<br>populations<br>controlled<br>(SP, BUR<br>la2C)          | No goal   | 61 of 1,045  | Not<br>applicable           | 71              | + 10             | 81            | + 10           |
| Condition of<br>paleontologic<br>al localities<br>(SP, BUR<br>la9)             | 1,201 of<br>3,248   | ESTIMATED:<br>1,076 of<br>3,263)<br>ACTUAL:<br>1,199 of<br>3,250 | - 2                         | 1,235           | + 36             | 1,268         | + 33           |
| Natural<br>resources<br>data sets<br>(PART, BUR<br>lb1)                        | 1,771 of<br>2,767   | 1,761<br>of 2,767  | - 10                        | 1,942           | + 181            | 2,145         | + 203          |
| Vital signs<br>identification<br>(PART, BUR<br>lb3A)                           | 216 of 270  | 222 of 270   | + 6                         | 240             | + 18             | 270           | + 30           |
| Vital signs<br>monitoring<br>(PART, BUR<br>lb3B)                               | 101 of 270  | 104 of 270   | +3                          | 153             | + 49             | 175           | + 22           |

| Measure  | 2005 Plan   | 2005 Actual    | Change<br>from 2005<br>Plan | 2006<br>Enacted  | 2006<br>Change<br>from 2005 | 2007<br>Request  | 2007<br>Change<br>from 2006 |
|--|---|----------------|-----------------------------|--|-----------------------------|--|-----------------------------|
| Parks with<br>ecosystems<br>in good or<br>fair condition<br>(PART) | No target;<br>Goal can<br>not be<br>adopted<br>until Vital<br>Signs<br>Monitoring<br>information<br>is available<br>(est. FYs<br>2009-2012) | Not applicable | Not<br>applicable           | No target;<br>Goal can not<br>be adopted<br>until Vital<br>Signs<br>Monitoring<br>information is<br>available<br>(est. FYs<br>2009-2012) | Not<br>applicable           | No target;<br>Goal can not<br>be adopted<br>until Vital<br>Signs<br>Monitoring<br>information is<br>available<br>(est. FYs<br>2009-2012) | Not<br>applicable           |
| EPMT<br>average cost<br>to control<br>exotic plants<br>(PART) 1    | \$550   | \$637          | - \$87                      | \$645  | +\$8                        | \$650  | +\$5                        |

Performance represents annual result.

Subactivity: Resource Stewardship

Program Component: Everglades Restoration and Research

# **Justification of 2007 Program Changes**

The 2007 budget request for Everglades Restoration and Research is \$9.829 million and 48 FTE, with no program changes from the FY 2006 enacted level.

## **Program Overview**

The Everglades Restoration and Research Program is critical to the restoration, preservation, and protection of Federal interest lands in South Florida. Projects implemented through this program relate directly to the restoration of the ecological systems for Everglades and Biscayne National Parks as well as Big Cypress National Preserve. The Everglades Restoration and Research program contributes directly to National Park Service efforts to provide results for the following DOI Strategic Plan Goals: "Improve Health of Watersheds, Landscapes, and Marine Resources;" "Sustain Biological Communities;" and "Protect Cultural and Natural Heritage Resources." The restoration projects contribute results that inform the control efforts of numerous exotic invasive plant species in other national parks.

The National Park Service is a major partner in the combined State and Federal effort to restore Florida's everglades. The south Florida NPS units are among the collaborating entities implementing major water resources projects such as the Modified Water Deliveries and the regional Comprehensive Everglades Restoration Plan (CERP). The CERP is a \$10.5 billion program of large-scale modifications to the water management infrastructure of south Florida, with a targeted completion date of 2038. Projects affecting NPS lands and waters occur in phases through the end of CERP implementation. The NPS works with Fish and Wildlife Service (FWS) and the U.S. Geological Survey (USGS) to support CERP projects through the development of restoration performance measures and quantitative evaluations of the environmental benefits of proposed actions. The Critical Ecosystems Studies Initiative (CESI) develops and implements long-term monitoring and assessment plans that are critical for adaptive management, while the DOI Task Force provides assistance in coordinating this multi-agency effort.

# **FY 2007 Program Performance Estimates**

The NPS expects that CESI will remain one of the primary venues of providing scientific information for use in restoration decision-making and guiding land management responsibilities in south Florida. In FY 2005, the NPS, FWS, and USGS amended the process by which they coordinate Everglades science funding and review of the priority science needs to determine the most critical projects to support with available funding. The Department will use a joint NPS and USGS request for proposals issued in FY 2006 to determine the projects to support in FY 2007.

The CESI planned activities for 2007 include:

- Planning, coordinating, and implementing adaptive management strategies that focus on the continued effort to refine and prioritize critical science needs.
- Developing decision support tools that define restoration success, as required for the implementation of CERP Interim Goals. Developing restoration success indicators for Biscayne Bay, as well as continued support for database management of all monitoring and modeling projects.
- Simulating modeling activities to emphasize the calibration and validation of existing modeling projects. Two key areas include prediction of salinity along the south Florida coastline and simulation of ecological responses to hydrologic.
- Monitoring projects will include critical long-term projects, such as the comprehensive fish and macro-invertebrate monitoring program, hydrologic monitoring, monitoring of T&E species such as the Cape Sable Seaside Sparrow, and transect sampling of vegetation most likely to be impacted by CERP. Other short-term monitoring projects include critical aquatic indicators of the success of the water management plan. A new hydrologic monitoring project starting in FY 2007 will focus on areas where water management activities have altered flows such as across the western Tamiami Trail in Big

# Cypress NP.

Basic research projects will continue to contribute to our understanding of how fire can be used as a management tool in the control of invasive/exotic vegetation as well as reduce the impacts of poor water quality. Scientists will study paleoecological and physiological impacts of reduced water flow on the estuarine ecotone communities to develop guidelines for evaluation of restoration impacts. Studies will analyze the impacts of increased freshwater flow and nutrient input on benthic community structure and trophic interactions. The examination of the breeding and dispersal of the Cape Sable Seaside Sparrow in the smaller subpopulations of the eastern Everglades will identify opportunities to increase survivability through adaptive management.



The endangered Cape Sable Seaside Sparrow,
Ammodramus maritumus mirabilis, exists within small
subpopulations in Everglades National Park. Studies of
the demographic response of the species to fire and
hydrologic change are underway.

Within the CERP program, the NPS will continue to align its efforts through FY 2007 to support the

accelerated implementation of pre-CERP foundation projects, the State's "Acceler8" projects, and "CERP Band 1" or initially authorized CERP projects. For the NPS, the most important foundation projects include the Modified Water Deliveries (MWD) and Canal 111 (C-111) projects and the State's Everglades Construction Project (ECP), which are anticipated to be completed by 2010. The MWD project will begin modifications to 68 miles of canals/levees upstream of Everglades NP, and improve 190,000 acres of wetlands in the Shark Slough watershed of Everglades NP. Similarly, the C-111 Project will begin to restore a more natural flow to over 60,000 acres in the Taylor Slough watershed of Everglades NP. Finally, the ECP will construct 43,500 acres of Stormwater Treatment Areas (STAs) to treat agricultural runoff before it enters the northern Everglades watershed, potentially improving water quality in all three of the downstream NPS units. Our expectation is that this redirection of efforts will result in ecological benefits to National Park Service lands and waters earlier than originally scheduled. The MWD is funded from the line-item construction program and a further component is included in FY 2007.

The CERP planned activities for 2007 include:

#### **Programmatic Activities**

- RECOVER (Restoration Coordination and Verification) teams Continue co-chairing one of the three RECOVER interagency science coordination teams, actively participating in the leadership group, and assisting other agency scientists as needed in CERP technical coordination.
- Operations Planning NPS staff will continue to participate on interagency calls to review current water management operations and develop sensible responses to water management emergencies.
- Initial Reservations NPS staff will continue to assist State and Federal decision makers in determining how much of the water currently delivered to Biscayne and Everglades National Parks is beneficial and required for fish and wildlife protection. This will help to define current water needs and direct future water delivery improvements.

#### **Project-Level Activities**

- Modified Water Deliveries and C-111 Projects Continue work with the Army Corps of Engineers and
  partner agencies to complete the final EIS for the structural and operational improvements needed as
  part of the Combined Structural and Operational Plan (CSOP). Assist in implementing the
  construction features for the 8.5 Square Mile Area, Water Conservation Area (WCA) conveyance and
  seepage, and C-111 detention areas.
- Everglades Construction Project Continue work refining the supplemental technologies to achieve the water quality compliance requirements in the Federal Consent Decree and State Everglades Forever Act. Continue tracking water quality improvements in the Loxahatchee NWR and Everglades NP.

- CERP Band 1 Projects Continue work on a series of CERP projects including Seepage Management in the L-30/L-31N Canals, early features in the WCA 3 Decompartmentalization and Sheetflow Enhancement, the C-111 North Spreader, the Biscayne Bay Coastal Wetlands.
- CERP Water Quality Feasibility Study Begin work on this new project intended to optimize the design and operation of CERP features to achieve water quality restoration targets.

# **FY 2006 Planned Program Performance**

CESI science projects that will be completed in FY 2006 will contribute critical information necessary to assess proposed Everglades restoration activities. Research projects are becoming more refined and focused to address specific issues that need resolution in order to advance understanding and refine tools to assess restoration alternatives. Monitoring projects are becoming more focused and are being coordinated with RECOVER in order to maximize available resources and simultaneously provide information to multiple agencies. The development of new modeling projects will provide information that increases confidence in the existing models. This includes field studies that provide data to be used to calibrate and validate model results. In addition, existing ecological models are progressing towards the ability to couple them with the South Florida Water Management Model and Natural System Models used by the Army Corps of Engineers and South Florida Water Management District.

The CESI planned activities for 2006 include:

- Using new methods for evaluating and monitoring water quality based on the bio-assessment of midge species to complement projects with similar objectives, such as the use of periphyton in STAs.
- The use of a water quality monitoring project focused along the eastern boundary of Everglades NP analyzing potential impacts of ModWaters and C-111 restoration projects to assess alternatives for CERP.
- The completion of landscape scale projects including the development of remote sensing technologies, which will improve evaluations of ecological connectivity across Everglades, and a study of the response of mangroves to regional environmental change.
- Statistical salinity models focused primarily on Florida Bay and the Southwest Gulf Coast of Everglades NP will be reviewed and prepared for application.
- Continue ongoing wood stork projects in Everglades NP and Big Cypress NPres. A study of wood stork foraging has contributed much needed information to regarding the status and habitat requirements of the species.
- Continued implementation of the recommended improvements made by the National Academy of Sciences (made in 2002 report).

The continued work on the pre-CERP foundation projects, such as the MWD and C-111 projects and the State's ECP, ensures that the features precursor to CERP are constructed and operated so that the CERP program can improve upon the health of the south Florida ecosystem. Ecosystem health improvements include improving water quality, enhancing water supply, and achieving and maintaining the benefits to the natural system and human environment described in the CERP plan. The MWD and C-111 Projects planned activities for 2006 include:

- Initial planning and construction of conveyance features in the L-67 and L-29 levees, along with elevation of the Miccosukee Osceola Camp to 11.0 feet along Tamiami Trail, to prevent flooding once water deliveries are increased to Everglades NP.
- Everglades NP staff will be completing a CSOP summary report during FY 2006. This report will be submitted to the Army Corps of Engineers (COE) and the FWS to provide critical ecological assessments needed for both the Fish and Wildlife Coordination Act Report (CAR) and the COE Environmental Impact Statement (EIS).

The Park Service will continue to work on programmatic level activities during 2006 related to the CERP Interim Goals, Guidance Memoranda, Initial Reservations, and RECOVER. The project level activities will focus on the Acceler8 and CERP projects that will be developing their Project Implementation Reports (PIRs) and EISs during 2006.

## **Programmatic Activities**

- Interim Goals Continue to assist Federal and State decision makers until the agreement on CERP goals for 2015 and 2036 is finalized.
- Guidance Memoranda Assist decision makers as needed until the remaining guidance memoranda are finalized.
- RECOVER Continue co-chairing one of the three RECOVER teams, actively participate in the leadership group, and assist other agency scientists as needed in CERP technical coordination.
- Operations Planning NPS staff will actively participate on interagency calls to review current water management operations and develop sensible responses to water management emergencies.
- Initial Reservations NPS staff will continue to assist State and Federal decision makers in determining how much of the water currently delivered to Biscayne and Everglades National Parks is beneficial and required for fish and wildlife protection.
- Monitoring NPS staff will continue to undertake an extensive monitoring program, which includes hydrology and both native and exotic vegetation and wildlife.

## **Project-Level Activities**

- Everglades Agricultural Area Review and comment on the Environmental Impact Statement.
- L-30/L-31N Seepage Management The draft Pilot Project Design Report is scheduled to be completed in September 2006. The Service will provide review and comment on the contents of the document.
- C111 Spreader Canal Project The NPS will evaluate project alternatives and work with the FWS to recommend the most environmentally preferred plan.
- Biscayne Bay Coastal Wetlands Project The NPS will evaluate project alternatives and work with the FWS to recommend the most environmentally preferred plan.
- Florida Bay Florida Keys Feasibility Study The NPS will conduct FATHOM model runs utilizing a range of freshwater inflows to evaluate potential effects on coastal embayments.

# **FY 2005 Program Performance Accomplishments**

In FY 2005, CESI had the following accomplishments:

- A database of maps of the fire history of Everglades NP and Big Cypress NPres was created to
  provide a resource for future studies on the effects of fire on the anticipated ecological response of
  restoration activities.
- Baselines for monitoring of oysters in southeast Florida were established and will be used in RECOVER to assess the impacts of changes in freshwater input to estuarine areas.
- Diatom-based water quality performance metrics for Biscayne Bay were developed and will be applied to critical assessments of restoration project designs intended to improve the condition of the ecological resources in the Bay.
- Hydrologic constraints on the establishment of Lygodium microphyllum, or Old World Fern, were reviewed as part of the exotic species management program at Everglades NP.
- A long-term study of the effects of fire on Cape Sable Seaside Sparrow demography found that the
  alternation of seasonal timing and frequency of fire could have a debilitating impact on the ability of
  the birds to survive.

In FY 2005, the pre-CERP MWD and C-111 Projects had the following accomplishments:

- Acquisition of all of the lands in the 8.5 Square Mile Area is complete and the planned construction of the protective levee for the area is on schedule.
- Pump stations have been built on the L-29 Canal (Tamiami Trail) to provide seepage management for developed lands immediately east of Everglades NP in the L-31N basin.
- The C-111 detention areas are complete and will function to reduce groundwater seepage from the Taylor Slough basin of Everglades NP.
- NPS staff completed the "Tamiami Trail Optimization Report" in May 2005, identifying the ecological benefits of several proposed modifications to the existing roadway and allowing for the restoration of more natural conditions in adjacent marshes.

- NPS staff participated in an inter-agency Project Delivery Team (PDT) tasked with developing a suite of performance measures, a quantification of ecological benefits methodology, a water quality assessment method, and individual alternatives leading to the selection of a tentative plan.
- NPS staff developed a suite of performance measures for Everglades NP, a quantification of ecological benefits methodology, and the modeling capability to test a series of environmentallypreferred alternatives to better understand the potential effects of simulated CSOP operations and structures on Everglades NP resources.

In FY 2005, the Acceler8 and initial CERP Projects had the following accomplishments:

## **Programmatic Activities**

- Interim Goals NPS staff led teams that developed quantitative CERP goals for 2015 and 2036, wrote and edited the interagency document to convey these goals to Federal and State decision makers, and assisted decision makers in developing an agreement, which has yet to be finalized.
- Guidance Memoranda NPS staff actively participated in an interagency process to develop six key
  guidance memoranda in accordance with the programmatic regulations for CERP. NPS staff
  collaborated with the technical staff at other agencies to develop scientifically defensible and
  technically feasible methods for implementing and documenting CERP projects. Four of these
  guidance memoranda have been finalized.
- RECOVER NPS staff participated in RECOVER efforts to coordinate CERP projects by co-chairing
  one of the three RECOVER teams, submitting comments on the system-wide performance measure
  review, and actively participating in the leadership group.
- Operations Planning NPS staff actively participated on interagency calls to review current water management operations and develop sensible responses to water management emergencies.
- Initial Reservations NPS staff assisted State and Federal decision makers in determining how much
  of the water currently delivered to Biscayne NP is beneficial for fish and wildlife. However, no
  reservations have been issued for either Biscayne NP or Everglades NP in FY 2005.

# **Project-Level Activities**

 Water Conservation Area 3 Decompartmentalization and Sheetflow Enhancement – NPS staff participated in a multi-agency PDT tasked to develop the draft Project Implementation Report (PIR), and the Project Management Plan.

- DECOMP Adaptive Management Project (DAMP)

   Due to stakeholder concerns with the filling in of the L-67A Canal, NPS initiated a strategy to implement a pilot project or "physical model" called DAMP. NPS staff participated in several sub-teams established as part of the DAMP, including (1) a quantification of ecological benefits sub-team, (2) a physical model design sub-team, (3) a data mining sub-team, and (4) a monitoring sub-team.
- Biscayne Bay Coastal Wetlands Project NPS staff participated on an interagency PDT and associated sub-teams to guide project development. The NPS developed a project design and screening tool (via a contract with the

Recently constructed detention areas on the eastern boundary of the park are intended to provide water deliveries with more natural spatial distribution and time while minimizing water quality impacts associated with direct structural discharges. The detention area in this image is the dark rectangle at the bottom left.

Cadmus group) linking the primary project goal of providing a stable estuarine salinity regime with specific project structural designs, which was used to develop a project alternative.

- C111 North Spreader Project NPS staff participated on an interagency PDT and associated subteams to guide project development guidelines and a project screening methodology to identify the final array of project alternatives.
- Minimum Flows for Biscayne Bay NPS staff developed a white paper identifying eco-physiographic zones, indicator species, and salinity regime requirements for Biscayne Bay, and provided this input to the SFWMD as part of an effort to establish minimum flows into Biscayne NP.

- Florida Bay/Florida Keys Feasibility Study NPS staff participated on an interagency PDT and associated sub-teams to guide project development. The NPS cooperated with the University of Miami Rosenstiel School of Marine and Atmospheric Sciences on a pilot study implementing fisheries habitat suitability modeling in Florida Bay to assess CERP benefits/impacts to the bay.
- L-30/L-31N Seepage Management NPS staff reviewed technical screening criteria and participated in alternative screening.

# **Performance Overview**

NOTE: This table does not include any proposed goal and measure changes resulting from the DOI Strategic Plan update now underway. See Performance Summary Tab for details.

| Measure  | 2005 Plan  | 2005 Actual                        | Change<br>from 2005<br>Plan | 2006<br>Enacted   | 2006<br>Change<br>from 2005 | 2007<br>Request   | 2007<br>Change<br>from 2006 |
|--|--|------------------------------------|-----------------------------|---|-----------------------------|---|-----------------------------|
| Land Health – Wetlands, Stream & Riparian, Upland, Marine & Coastal (SP, BUR Ia1C, Ia1D, Ia1E, Ia1F, | No target.<br>Work with<br>parks to<br>assess<br>resources | Resource<br>assessment<br>ongoing. | Not<br>applicable           | See<br>discussions<br>in Natural<br>Resources<br>Management | Not<br>applicable           | See<br>discussions<br>in Natural<br>Resources<br>Management | Not<br>applicable           |

Subactivity: Resource Stewardship

Program Component: Cultural Resources Applied Research

# **Justification of 2007 Program Changes**

The 2007 budget request for the Cultural Resources Applied Research program is \$19.539 million and 177 FTE, a program change of \$921,000 and 9 FTE from the 2006 level.

# Reduce Support for Vanishing Treasures Initiative: -\$0.079 million; -1.0 FTE

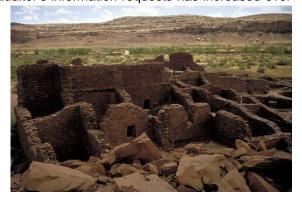
The NPS proposes reducing support for the Vanishing Treasures Initiative in order to support higher priority needs. This funding was part of a \$296,000 increase added by Congress in FY 2006 to support the preservation of historic structures at Fort Laramie NHS, Fort Union NM, and Tumacacori NHP, and emergency stabilization of historic and prehistoric structures in parks throughout the Intermountain Region.

# Enhance Inventory and Monitoring of Historic Structures and Landscapes: +\$1.000 million; +10.0 FTE

Funding is requested to inventory and monitor historic structures and cultural landscapes. The NPS is proposing an increase for inventorying in FY 2007 in response to the 2006 PART recommendation to "Establish for the FY07 Budget, more ambitious targets to complete inventories sooner..." This increase would enable the NPS to make significant progress toward completing and updating the Cultural Landscapes Inventory (CLI) and the List of Classified Structures (LCS) and to perform annual verification of inventory data, thereby meeting the NPS reporting responsibilities for stewardship assets. For the past three years, the LCS and CLI data have been audited, at the request of the Inspector General, as the data are included in the DOI Annual Report on Performance and Accountability and the NPS Annual Report. The NPS anticipates that quarterly reporting will be required in the future by the Department and the auditors. The requested funding would enable the NPS to accommodate the information requests without sacrificing basic inventory and monitoring effort. Changes in NPS inventorying and monitoring performance will be seen in the appropriation year and in out years.

This increase would fund 10 term/contractor positions to continue to conduct the Cultural Landscapes Inventory and List of Classified Structures. The increased importance of these inventories in meeting the Park Service's reporting responsibilities for stewardship assets dictates this enhanced effort. In addition, the workload associated with meeting the independent auditor's information requests has increased over

the past three years to the extent that more effort is required at a greater professional level than currently exists. This additional funding would ensure a full time professional effort would be expended to provide complete, accurate, and reliable information concerning cultural landscapes and historic and prehistoric structures on a quarterly basis. This request would result in a 16.7 percent increase in the number of historic and prehistoric structures and a 10.9 percent increase in the number of cultural landscapes that have complete, accurate and reliable information in FY 2007. In FY 2008 and beyond, an additional 16.7 percent of historic and prehistoric structures and 9.9 percent of cultural landscapes would have complete, accurate and reliable information.



Chaco Culture NHP is among NPS sites preparing to celebrate the centennial of the Antiquities Act of 1906.

| Total Performance  | +10.9% items compete, accurate and reliable +16.7% items compete, accurate and reliable |   |   |        |        |  |  |  |
|--|---|---|---|--------|--------|--|--|--|
|  | Α   | B Rems  | E   |        |        |  |  |  |
|  | _   | A B C D= B+C  Overall Performance Changes from 2006 to 2007 |   |        |        |  |  |  |
| Measure  | 2006<br>Enacted<br>Performance  | 2007 Base<br>Performance<br>Level                           | Out-year<br>Impact of<br>2007 Program<br>Change on<br>Performance |        |        |  |  |  |
| % of Cultural Landscape inventory (CLI) with complete, accurate and reliable information (PART CR-5, BUR Ib2B) | 73%   | 81%   | +10.9%  | 91.9%  | + 9.9% |  |  |  |
| % of historic and prehistoric structures on LCS with complete, accurate and reliable information (PART CR-5,   |   |   |   |        |        |  |  |  |
| BUR lb2C)  | 66.6%   | 66.6%   | +16.7%  | 83.3%% | +16.7% |  |  |  |

Column B: The performance level you expect to achieve absent the program change (i.e., at the 2006 enacted level plus/minus funded fixed cost/related changes); this would reflect, for example, the impact of prior year funding changes, management efficiencies, absorption of fixed costs, and trend impacts.

# **Program Overview**

NPS conducts a program of basic and applied research, in accordance with current scholarly standards, to support planning, management, and interpretation of park cultural resources. Detailed, systematic data about resources and their preservation and protection needs are critical to effective management of the resources. The program supports the DOI goal, "Protect the Environment and Preserve Our Nation's Natural and Cultural Resources."

Cultural resource inventory systems manage data obtained through research and are the only source for complete, accurate, and reliable information on these resources. These systems provide the basic information necessary for park planning and

#### At A Glance...

#### **Current Inventory Systems**

- Archeological Sites Management Information System (ASMIS)
- Cultural Landscapes Inventory (CLI)
- List of Classified Structures (LCS)
- National Catalog of Museum Objects (Automated National Catalog System-ANCS+)
- Ethnographic Resources Inventory (ERI)
- Cultural Resources Management Bibliography (CRBIB)

provide the basic information necessary for park planning and development proposals to comply with archeological, environmental, and historic preservation mandates. The inventory systems also provide information essential to selecting appropriate and cost-effective strategies for managing, preserving, maintaining, interpreting, consulting about and providing public access to cultural resources. These applied research activities are related to building and improving inventory systems and ensuring that the systems acquire and maintain data effectively and efficiently.

## **Archeological Resources:**

- Archeological overviews and assessments; archeological identification and evaluation studies; and periodic condition assessments are undertaken to guide park managers in planning and management decisions.
- Complete, accurate, and reliable documentation is collected for all archeological resources and used in park planning, intepretation, protection, and resource management.
- ASMIS records are created for all archeological resources, updated when new information becomes available, and used for planning, resource management and national level accountability reports.
- National Register of Historic Places and National Historic Landmark documentation.
- New strategies are considered and implemented, as appropriate, for completing archeological inventories and documentation sooner and more efficiently.
- Performance-based allocation of funds.

# **Cultural Landscapes:**

- Cultural landscape reports to guide park management in treatment and use decisions.
- Documentation of cultural landscapes.
- National Register of Historic Places and National Historic Landmark documentation.
- · Performance-based allocation of funds.

## **Historic and Prehistoric Structures:**

- Historic structure reports to guide park management in treatment and use decisions.
- Documentation of historic structures.
- National Register of Historic Places and National Historic Landmark documentation.
- Performance-based allocation of funds.

## **Museum Collections:**

- Museum collection management plans, collection storage plans, collection condition surveys, and historic furnishings reports.
- Documentation (cataloging) for all museum objects.
- · Performance-based allocation of funds.

# **Ethnographic Resources:**

- Basic ethnographic surveys, field studies, and consultations in parks.
- Ethnographic overviews and assessments to identify relationships with Native Americans and other ethnic and occupational groups associated traditionally with park resources.
- Documentation of and inventory of ethnographic resources
- Exploration of ways to improve reporting of performance in ethnographic research that links to budget allocations.

#### Historical Research:

- · Historic resource studies.
- Park administrative histories and other historical studies.
- National Register of Historic Places and National Historic Landmark documentation.
- Exploration of ways to improve reporting of performance in historical research that links to budget allocations.
- Find more information online about Cultural Resources Applied Research at www.cr.nps.gov.

## **FY 2007 Program Performance Estimates**

## Performance on NPS strategic goals:

- Utilize archeological overviews and assessments, archeological identification and evaluation studies, and entry of known and documented paper site records into ASMIS to increase the inventory of archeological sites to 65,000. All newly entered site records into ASMIS will be complete, accurate, and reliable to improve management efficiency. Superintendents that manage archeological sites at their park units will review and sign the Superintendent's Certification Report in ASMIS to verify, validate, and approve site additions and withdrawals during the fiscal year.
- Increase cultural landscapes that have complete, accurate, and reliable information on the CLI by 91.1 percent from FY 2003 (from 148 to 284 landscapes).
- Increase the historic structures that have complete, accurate and reliable information on the FY 2003 LCS to 83.3 percent (22,100 of 26,531 structures).
- Catalog an additional 2 million museum objects bringing the total to 59.1 million objects cataloged—a 39 percent increase from FY 2001. Expect cataloging efficiency to improve with funds distributed according to documented performance.
- Increase the Ethnographic Resources Inventory (ERI) to 1,812 records, an increase of 9.4 percent from FY 2006 and 195 percent from the baseline year of FY 2001.
- Four more parks will have both a current Historic Resource Study and administrative history.

#### **Other Program Accomplishments:**

- Continue conducting an estimated 250 field studies that cover approximately 50,000 acres of parkland as part of archeological inventory projects, and identify and document an estimated 1,000 archeological sites.
- Provide field training in parks for non-destructive archeological investigations through remote sensing.
- Develop Cultural Landscape Reports for parks.
   For example, Fort Donelson NB proposes a report for the River Batteries and Rock Creek Park plans a report for Battleground Cemetery.
- Prepare Historic Structure Reports for parks.
   For example, Harry S Truman NHS plans to complete reports for the two Wallace Homes.
- Catalog an additional two million museum objects, specimens and archival collections. For



Using coring equipment to create samples for National Center for Preservation and Technology research on limewash recipes held at Cane River Creole NHP.

- example, Gulf Islands NS plans to update the documentation for its museum collections following Hurricane Katrina; Sitka NHP proposes to catalog important archival records to make them accessible to researchers; Amistad NRA plans to catalog archeological collections from the 1965 excavation of the Arenosa Rockshelter, making this information available for exhibits, education programs, and partnership projects; and Lowell NHP plans to catalog records documenting the activities of owners, managers, engineers, and workers who designed, built, and maintained Lowell's canal system.
- Improve public access to museum collections. For example, New Bedford Whaling NHP plans to
  prepare a historic furnishings implementation plan to accurately interpret a whaling merchant's home,
  Fort Raleigh NHS plans to redesign exhibits at its visitor center; parks Servicewide plan to make more
  than 7,000 additional digital images of park collections available via the Web Catalog and web
  exhibits; and 13 parks propose to install 14 major new museum exhibits.
- Complete plans for museum collections management. For example, Florissant Fossil Beds NM proposes to prepare its first Collection Management Plan; Buffalo NR plans to perform a condition assessment for historic Civilian Conservation Corps furniture; National Capital Region plans to initiate a ten-year project to perform baseline condition assessments for all collections in the region; and Everglades NP proposes to prepare an Integrated Pest Management Plan for South Florida parks.
- Initiate an estimated 20 research projects, continue 50 projects, complete 30 projects in ethnographic overviews and assessments, traditional use studies, rapid ethnographic assessments, as well as components to ethnohistories, oral histories, subsistence studies, and studies identifying human remains for repatriation under NAGPRA, as well as 20 special training projects, and 150 consultations with government agencies, Indian Tribes, and other traditionally associated peoples and groups to improve the efficiency and effectiveness of cultural and natural resource management.

## **FY 2006 Planned Program Performance**

# Performance on NPS strategic goals:

• Utilize archeological overviews and assessments, archeological identification and evaluation studies, and entry of known and documented paper site records into ASMIS to increase the inventory of archeological sites to 64,000, a 10.8 percent increase from the FY 2003 baseline of 57,752. This will be an increase of 993 sites from actual performance in FY 2005 of 63,007 sites or 1.6 percent. All site records newly entered into ASMIS are complete, accurate, and reliable to improve management efficiency. All superintendents that manage archeological sites at their park units review and sign the Superintendent's Certification Report in ASMIS to verify, validate, and approve all site additions and withdrawals during the fiscal year.

- Increase cultural landscapes that have complete, accurate, and reliable information on the CLI by 73
  percent from FY 2003 (from 148 to 256 landscapes).
- Increase historic structures that have complete, accurate, and reliable information on the FY 2003 LCS by 66.6 percent (17,670 of 26,531 structures).
- Catalog an additional 2 million objects bringing the total to 57.1 million objects cataloged—a 34.7
  percent increase from FY 2001. Expect cataloging efficiency to improve with funds distributed
  according to documented performance.
- Increase the ERI to 1,652 records, an increase of 10.7 percent from FY 2005 and 183 percent from the baseline year of FY 2001.
- Add four more parks to the number with both a current Historic Resource Study and a current administrative history, bringing the total to 52.

## **Other Program Accomplishments:**

- Launch the new, centralized version of ASMIS that will allow online, real-time data entry and updates
  in a more controlled and monitored system and will facilitate real-time national level reporting (this is a
  milestone for PART). Publish related User Guide and ASMIS Data Dictionary. Provide training for the
  new system as funding allows.
- Allocate FY 2006 CRPP funds targeted for archeological inventory to the regions based on regional
  accountability of FY 2005 funds. Develop criteria to allocate FY 2007 funds based on both
  accountability and accomplishments. (These are milestones for PART).
- Conduct an estimated 250 field studies that cover approximately 50,000 acres of parkland as part of
  archeological inventory projects, identify and document an estimated 1,000 archeological sites, and
  provide field training for non-destructive archeological investigations through remote sensing at Fort
  Frederica NM.
- Prepare or update Historic Structure Reports for parks. For example, Saint-Gaudens NHS plans to update reports for Aspet and Little Studio, and Olympic NP plans to prepare a report for the Headquarters District.
- Develop Cultural Landscape Reports for parks. For example, Acadia NP plans a report for the historic motor road system.
- Provide increased access to museum collections. For example, Carl Sandburg Home NHS proposes to provide web access to digital images of one of the few original and complete collections of the "Atlas to Accompany the Official Records of the Union and Confederate Armies"; NPS plans to launch new thematic web exhibits featuring collections from Nez Perce NHP, Arlington House, and John Muir NHS; NPS proposes to add eight new park-specific *Teaching with Museum Collections* lesson plans in conjunction with new web exhibits at www.cr.nps.gov/museum and on park home pages; and 14 parks plan to install 16 major new museum exhibits.
- Complete a Servicewide Collections Storage Plan that will lead to a more cost-effective and efficient approach to meeting preservation and protection standards and increase the number of collections in good condition; and complete park-specific plans. For example, John Day Fossil Beds NM proposes to write a collection management plan to inform the General Management Plan process; Salem Maritime NHP proposes to update its Collection Management Plan; Fort Scott NHS proposes a condition assessment of its art collection; and Mesa Verde NP will prepare an Emergency Operation Plan for the museum collection.
- Initiate or continue 87 research projects, including ethnographic overviews and assessments, traditional use studies, rapid ethnographic



Archivist reviews historic resource management records at Rocky Mountain NP.

assessments, ethnohistories, oral histories, subsistence studies, and cultural affiliation studies, and studies identifying human remains for repatriation under NAGPRA.

- Continue work on some 51 Historic Resource Studies, 27 administrative histories, and three special history studies
- Enter an estimated 161 records in the ERI, listing places such as Castle Rock Butte in Bighorn Canyon NRA; landscapes; objects at archeological sites and museums; and natural resources.

# **FY 2005 Program Performance Accomplishments**

## Performance on NPS strategic goals:

- Archeological sites inventoried: Exceeded the goal to increase the number of sites inventoried by 7.4 percent (from 57,752 to 62,000) since FY 2003; the actual number of sites inventoried was 63,007 sites, a 9.1 percent increase since FY 2003.
- Cultural landscapes inventoried: Cultural landscapes on the CLI that have complete, accurate, and reliable information increased by 57.4 percent from FY 2003 (from 148 to 258 landscapes), which exceeded the goal of 54.1 percent.
- Historic structures inventoried: Historic structures with complete, accurate, and reliable information represent 47 percent of the FY 2003 LCS (12,474 of 26,531 structures). Five of the seven regions met their goals, however the NPS did not meet the overall goal of 50% due to insufficient resources. Future funding will be based upon performance.
- Museum objects cataloged: NPS currently has 55.1 million objects cataloged, a 30 percent increase from FY 2001, exceeding the target of 54.1 million for FY 2005. NPS attributes better than expected performance to a continued emphasis on the effort to eliminate the cataloging backlog.
- Ethnographic resources inventoried: NPS has inventoried 1,492 ethnographic resources, a 60.6 percent increase over 929, the FY 2001 baseline. This number is close to the original target of 1,540 resources inventoried (62.8 percent over the 2001 baseline).
- Park historical research: NPS added six to the list of parks with both a current historic resource study
  and a current administrative history. In general, the targets for bureau goal lb2F in other years
  (except for FY 2005, as explained below) have been to add six parks to that list annually. NPS failed
  to meet this overly optimistic goal of adding 12 parks due to some regions funding multi-year and
  complex studies that absorbed much of the available funding. NPS anticipates meeting the revised
  goal target in FY 2006.

## Other Program Accomplishments:

- Prepared and began implementation of a Corrective Action Plan (CAP) for Noncompliance Issues Identified in the FY 2004 Audited Financial Statement that focused on accurate and timely recording of asset transactions, supervisory review and approval of asset transactions, consistent maintenance of documentation supporting asset additions and deletions, and adequate documentation for asset transactions. The CAP is a PART milestone.
- Launched a major upgrade of the ASMIS software, to include critical new data fields to facilitate RSSI
  reporting of heritage assets, search and other utilities, and extensive modifications to the User Guide
  and ASMIS Data Dictionary.
- Conducted more than 280 field studies that inventoried 66,000 acres of parkland, identifying over 1,110 new archeological sites and revisiting 1,350 or more known archeological sites. Completed over 80 archeological projects and started 120 or more new projects. Provided contractors and cooperators with about \$3 million 70 projects. Over 170 volunteers worked on 50 or more projects and, in doing so, contributed more than \$322,000 in labor cost savings. Worked with other Federal agencies, States, Tribes, and local governments on 40 NPS projects. Provided field training for non-destructive archeological investigations through remote sensing at Hopewell Culture NHP.

- Prepared Cultural Landscape Reports for several parks, including Puuhonua O Honaunau NP and Fort Pulaski NM.
- Prepared Historic Structure Reports for parks, including the Hunt House at Women's Rights NHP.
- Cataloged more than 3.1 million objects, specimens and archives in park collections, including archival collections at Great Smoky Mountains NP, paleontology specimens at Hagerman Fossil Beds NM, archeology objects at Delaware Water Gap NRA, and biology specimens at Haleakala NP.
- Increased access to NPS museum collections. Park museum management staff responded to an estimated 171,000 public research requests and 17,000 research requests from within the parks. Parks managed an estimated 2,100 loans for over eight million objects. In addition, parks exhibited an estimated 319,000 objects, specimens, and archival documents. For example, parks installed four major museum exhibits in parks—Fort Stanwix NM, Moores Creek NB, Cabrillo NM, and Shenandoah NP; added three new thematic exhibits to the web site at www.cr.nps.gov/museum featuring collections from Bandelier NM; Alcatraz Island, Golden



As part of a conservation team, an NPS curator cleans decorated walls and ceilings of the library in Thomas Edison's Home at Edison NHS.

Gate NRA; and Grant-Kohrs Ranch NHS; posted monthly web features for the NPS Museums Centennial; and added 13 *Teaching with Museum Collections* lesson plans to the web, complementing the virtual museum exhibits and promoting object-based learning with park collections.

- Initiated a Servicewide Museum Collections Storage Plan to provide a more cost-effective and
  efficient approach to preservation and protection for park collections, and completed park-specific
  collection management plans. For example, Fort Scott NHS conducted a Collection Condition Survey,
  Pinnacles NM completed a Collection Management Plan, and Congaree NP created a Housekeeping
  Plan.
- Initiated 16 research projects, continued 52 research projects, and completed 12 research projects in
  ethnographic overviews and assessments, traditional use studies, rapid ethnographic assessments,
  as well as components to ethnohistories, oral histories, subsistence studies, and studies identifying
  human remains for repatriation under NAGPRA.
- Entered 112 records in the Ethnographic Resources Inventory.
- Completed or continued 51 Historic Resource Studies, including, Minidoka Internment NM, Keweenaw NHP, CCC in National Capital Parks, Cold War in South Florida (for Everglades NP, Biscayne NP, Big Cypress NPres, and Dry Tortugas NP), Marsh-Billings-Rockefeller NHP, Route 66, and Wrangell-St. Elias NP (Kennecott).
- Initiated 10 Historic Resource Studies, including Big Hole NB, Hawaii Volcanoes NP, George Washington Memorial Parkway (Great Falls Park), Cedar Creek and Belle Grove NHP, and Palo Alto Battlefield NHS. Initiated two Administrative Histories for Pipe Spring NM and Bering Land Bridge NPres.
- Continued or completed five special history studies, including American Revolution in the South (6 parks in Southeast Region), architectural history of San Antonio Missions NHP, Underground Railroad special history study for Hampton NHS.
- Completed or continued 29 administrative histories, including Death Valley NP, Cape Hatteras NS, Fire Island NS, Canyonlands NP, and Katmai NP (Brooks River bear study).

# **Performance Overview**

NOTE: This table does not include any proposed goal and measure changes resulting from the DOI Strategic Plan update

| now underway | y. See Pertormar | nce Summary | Tab for details.                      |
|--------------|------------------|-------------|---------------------------------------|
|              | i i              |             | T T T T T T T T T T T T T T T T T T T |

| Measure  | 2005 Plan           | 2005 Actual         | Change<br>from 2005<br>Plan | 2006<br>Enacted     | 2006<br>Change<br>from 2005 | 2007<br>Request     | 2007<br>Change<br>from 2006 |
|--|---------------------|---------------------|-----------------------------|---------------------|-----------------------------|---------------------|-----------------------------|
| Archeologica<br>I sites<br>inventoried<br>(BUR Ib2A)   | 62,000              | 63,007              | + 1,007                     | 64,000              | + 993                       | 65,000 sites        | + 1,000                     |
| Cultural<br>Landscapes<br>inventoried<br>(BUR lb2B)  | 228                 | 258                 | + 30                        | 256                 | - 2                         | 284                 | + 28                        |
| Historic<br>Structures<br>inventory<br>updated<br>(PART, BUR<br>lb2C)                                    | 13,266 of<br>26,531 | 12,474 of<br>26,531 | - 792                       | 17,670 of<br>26,531 | + 5,196                     | 22,100 of<br>26,531 | + 4,430                     |
| Museum<br>Objects<br>Catalogued<br>(BUR lb2D)  | 54.0 million        | 55.1 million        | +1.1 million                | 57.1 million        | +2.0 million                | 59.1 million        | + 2.0 million               |
| % of<br>museum<br>objects<br>catalogued<br>and<br>submitted to<br>the National<br>Catalog<br>(PART CR-6) | 48.1%               | 49.3%               | + 1.2%                      | 48.4%               | - 0.9%                      | 48.7%               | + 0.3%                      |
| Cost to<br>catalog a<br>museum<br>object (PART<br>CR-7)  | \$0.93              | \$1.21              | +\$ 0.28                    | \$0.91              | - \$0.30                    | No target           | Not<br>applicable           |
| Ethnographic resources inventoried (BUR lb2E)  | 1,512               | 1,492               | - 20                        | 1,652               | + 160                       | 1,812               | + 160                       |
| Historic<br>Resource<br>Study and<br>Administrativ<br>e History<br>(BUR lb2F)                            | 54 of 384           | 48 of 388           | -6                          | 52 of 388           | +4                          | 56 of 388           | + 4                         |

Subactivity: Resource Stewardship

Program Component: Cultural Resources Management

## **Justification of 2007 Program Changes**

The 2007 budget request for the Cultural Resources Management program is \$79.126 million and 760 FTE, a program change of -\$217,000 and -2 FTE from the 2006 level.

### Reduce Support for Vanishing Treasures Initiative: -\$0.217 million; -2.0 FTE

The NPS proposes reducing support for the Vanishing Treasures Initiative in order to support higher priority needs. This funding is part of a \$296,000 increase added by Congress in FY 2006 to support the preservation of historic structures at Fort Laramie NHS, Fort Union NM, and Tumacacori NHP, and emergency stabilization of historic and prehistoric structures in parks throughout the Intermountain Region.

## **Program Overview**

The Cultural Resources Management program of the National Park Service supports DOI's goal, "Protect the Environment and Preserve Our Nation's Natural and Cultural Resources, "through the management of archeological resources, cultural landscapes, historic and prehistoric structures, museum collections, and ethnographic resources. Additionally, staff experts provide enhanced technical assistance, education, training, and planning support to NPS managers and their national and international partners.

Cultural resources management activities ensure the preservation and protection of cultural resources. Although parks do this work, regional and Servicewide offices provide

#### **Cultural Resources Threats...**

- Archeological Site Looting and Vandalism
- Lack of adequate storage and care of park museum collections
- Weather
- Air pollution
- Inadequate attention to stabilization, maintenance, and repair of structures, landscapes, and museum collections
- Failure to monitor changes in the resource
- Failure to correct improper uses
- Lack of documentation and determination of appropriate treatment strategies

support, especially for major preservation work. To be effective, this work must be ongoing. For example, keeping up with maintenance needs can slow deterioration, decrease costs for repair, and prevent the loss of the cultural resource. Coordination among responsible programs eliminates the potential for redundant and conflicting activities, maximizing the benefit from preservation and protection actions. An example of this strategy in action is the integration of preservation of historic structures with maintenance strategies for all facilities.

Cultural resources management responsibilities and performance strategies include:

#### **Archeological Resources**

- Maintain the integrity and improve the condition of archeological resources.
- Protect and preserve archeological sites, collections, and records.
- Share information about park resources with professionals, with park visitors through interpretation programs, and with the public through NPS publications and websites.
- Explore ways to improve park reporting of performance that links to budget allocations.

#### **Cultural Landscapes and Historic and Prehistoric Structures**

- Stabilize historic and prehistoric structures and cultural landscapes.
- Review of cost per structure stabilized.

#### **Museum Collections**

Preserve and protect collections to make them accessible for public enjoyment and knowledge.

- Provide support to the Interior Museum Property Program.
- Introduce budgetary incentives that will accelerate the correction of deficiencies in museum facilities and increase the percentage of NPS and Department of the Interior preservation and protection standards met and the percentage of collections in good condition.

#### **Ethnographic Resources**

- Provide baseline data on park cultural and natural resources and on cultural peoples and groups with traditional associations to parks.
- Document and inform legislatively required consultation with traditionally associated peoples and groups.

#### Park NAGPRA

- Assist parks with Native American Graves Protection and Repatriation Act (NAGPRA) compliance.
- Maintain Servicewide record of NAGPRA compliance in parks.
- Target Park NAGPRA funds specifically to NPS compliance with NAGPRA, which includes assistance to parks, tribal consultation, and other NAGPRA-related activities.

### **Underground Railroad**

- Maintain the Network to Freedom, a listing of sites, programs, and facilities with a verifiable connection to the Underground Railroad.
- Provide technical assistance to parks, States, local governments, and private organizations that are documenting and preserving Underground Railroad resources.

The **Cultural Resources Preservation Program (CRPP)** provides funds for security, environmental control, and other concerns for museum collections, and for the urgent stabilization and preservation of archeological and historic sites, structures, cultural landscapes, and museum objects. This program sets aside \$2.0 million annually to address stabilization needs for 100 of the most important historic and prehistoric structures. Another program for preserving cultural resources is the **Cyclic Maintenance for Historic Properties Program**, which provides funds to maintain historic and prehistoric sites and structures, cultural landscapes, and museum facilities and collections. This cyclic program appears in the Facility Operations and Maintenance budget subactivity description.

Regional Offices and Cultural Resource Centers. Specialists at regional offices, cultural resource centers, and the Harpers Ferry Center carry a share of the preservation workload for parks that lack the necessary personnel. Contract work frequently augments staff or provides specialized expertise. Centers provide research, project supervision, technical assistance, information management and GIS expertise, management planning, and centralized management of museum objects. NPS maintains the following cultural resource centers:

- Alaska Regional Curatorial Center
- Intermountain Cultural Resources Center
- Midwest Archeological Center
- Museum Resource Center (National Capital Region)
- Northeast Museum Services Center
- Olmsted Center for Landscape Preservation
- Southeast Archeological Center
- Western Archeological and Conservation Center (Intermountain Region)

## **FY 2007 Program Performance Estimates**

## Performance on NPS strategic goals:

- Increase cultural landscapes in good condition to 32.5 percent of the CLI and increase historic structures in good condition to 46.5 percent of the LCS.
- Meet 73.4 percent of NPS preservation and protection standards for museum facilities. Implement the Servicewide Collections Storage Plan to greatly enhance NPS's ability to meet this goal. Using facility condition standards as an indicator of collection condition, 56.6 percent of park collections will be in good condition.

Fifty-two percent of archeological sites with condition assessments will be in good condition. Based
on the Regional Condition Assessment plans submitted in December 2005, over 2,000 recorded sites
will be visited and assessed for condition.

### **Other Program Accomplishments:**

- Expand guidance provided in NPS Archeology Handbook supporting Director's Order 28A: Archeology to improve management of resources by completing a module on condition assessments and monitoring, and by completing a module on archeology in wilderness.
- Stabilize historic structures, for example, Sand Island Light House and Outbuildings at Apostle Islands NL, St. Francis Hotel at Nicodemus NHS, and Crystal Cove Main Lodge foundation at Isle Royale NP.
- Correct planning, environmental, storage, security, and fire protection deficiencies in park museum collections. For example, Alaska Region plans to upgrade museum storage equipment regionwide; Yosemite NP proposes to continue the moving and rehousing of its collections to address longstanding storage and environmental control deficiencies; and Morristown NHP plans to upgrade fire extinguishers in all areas with collections.
- Provide conservation treatment for museum collections to improve their condition. For example,
  Grand Teton NP proposes to improve the exhibit environment and stabilize and treat the David T.
  Vernon collection, a significant and complex assemblage of North American Indian objects that is
  actively deteriorating; and Weir Farm NHS plans to treat recently acquired original furnishings that are
  crucial to preserving and interpreting the work of J. Alden Weir and the artistic tradition at Weir Farm.
- Continue ethnographic special projects, including issues-driven research projects, ERI consultation tracking, repatriation consultation, demonstration research, related publications and presentations, and monitoring of ongoing resource use by traditionally associated peoples and groups.
- The National Underground Railroad Network to Freedom program will add 50 new sites, programs, or facilities to the Network to Freedom listing.
- The Vanishing Treasures Program, initiated in 1993, addresses critical weaknesses that threaten unique, rare, and irreplaceable prehistoric and historic ruins. Projects range from condition assessments to baseline documentation to full structural stabilization and site reburial. The Vanishing Treasures Program will assist 12 parks to meet their preservation goals. Projects include condition assessments of the Second Fort Site Complex, Walnut Canyon NM, architectural sites in the Clear Creek Drainage, Grand Canyon NP, and front country sites, Wupatki NM; preservation documentation at Mission Espada, San Antonio Missions NHP; and documentation and development of cultural landscape treatment strategies for the Abo Mission complex, Salinas Pueblo Missions NM.

### **FY 2006 Planned Program Performance**

#### Performance on NPS strategic goals:

- Increase historic structures in good condition to 46 percent of the LCS and increase cultural landscapes in good condition to 32 percent of the CLI.
- Meet 72.4 percent of NPS preservation and protection standards for museum facilities. The creation
  of the Servicewide Collections Storage Plan will greatly enhance NPS's ability to meet this goal.
  Using facility condition standards as an indicator of collection condition, 54.4 percent of park
  collections will be in good condition.
- Fifty-one percent of archeological sites with condition assessments will be in good condition, which is a 1.2 percent increase from the FY 2005 actual (16,211 of 32,537). Based on the Regional Condition Assessment plans submitted in December 2005, over 2,000 recorded sites will be visited and assessed for condition.

#### **Other Program Accomplishments:**

 Complete or update the Servicewide review and final report on the total estimate of archeological sites on NPS lands, including an estimated range of sites in each region; the Servicewide review and final report on the validity and verification of condition data for archeological sites in ASMIS; and guidance for determining archeological site condition and recording it in ASMIS.

 The Archeological Sites Work Group consults with the Park Facilities Management Division to draft guidance on condition inspections, specification templates, condition calculators and cost assemblies, and other issues for data input into the FMSS.

- Develop NPS Archeology Handbook to support the Director's Order 28A: Archeology to improve management of resources with modules on permits for archeology on Federal land and public outreach in support of resource protection.
- Stabilize structures in parks, for example, Lake Fish Hatchery Buildings at Yellowstone NP, Hidden Creek Cabin at Katmai NP & Pres, and Santa Rosa Island School House at Channel Islands NP.
- Correct planning, environmental, storage, security, and fire protection deficiencies in park museum collections. For example, Grand Teton NP plans to install museum storage cabinets; Olympic NP proposes to upgrade its museum facilities; Everglades NP intends to upgrade its HVAC



Preservation crew at Aztec Ruins NM removes backfill to install drainage systems and other improvements.

- system; and George Washington Birthplace NM plans to purchase storage equipment to house its collection.
- Improve the item-level condition of museum collections through treatment. For example, Hopewell
  Culture NHP proposes to correct failing 80-year old treatments on highly significant artifacts from
  Mound City; Adams NHS proposes to continue treatment of the books in the John Quincy Adams
  library; and Vicksburg NMP plans to treat deteriorated objects.
- Complete the draft ethnography Director's Order (DO#28-B) and the Ethnography Handbook (RM #28-B)
- Complete and distribute park NAGPRA guidance that has been developed using recommendations from parks, Tribes, and scientific organizations.
- Publish "Beyond Oral Traditions", a guideline on documenting Underground Railroad sites and stories
- Expand the National Underground Railroad Network to Freedom listings by 45 new listings.
- An estimated 12 Vanishing Treasures preservation projects will be implemented to improve conditions for 12 prehistoric and historic structures. Two craft and preservation specialists will be hired and trained. Projects include, preservation treatment and documentation of lime kilns, Saguaro NP; preparation of a cultural landscape treatment strategy for sites in Parunweap Canyon, Zion NP; development of a backfill and drainage plan and initial treatment for Pueblo Bonito, Chaco Culture NHP; a condition assessment for sites in the river corridor, Canyonlands NP; and emergency treatment for Kaibab House Pueblo, Wupatki NM.

### **FY 2005 Program Performance Accomplishments**

#### Performance on NPS strategic goals:

- The NPS has 28,966 cultural properties in good condition, exceeding the target by 9.1 percent.
- Archeological sites condition: Of the 32,537 archeological sites with condition information, 16,211 were in good condition (49.8 percent). Parks increased the number of sites with a condition assessment by 3,426 and the number of sites in good condition by 1,910. With 49.8 percent of sites with condition assessments in good condition, NPS did not fully meet its goal of 50 percent. This shortfall was due primarily to logistical constraints and insufficient staff and funding resources to conduct condition assessments and make improvements to site conditions.
- Cultural landscapes condition: Increased cultural landscapes in good condition on the CLI to 36.8 percent, exceeding the goal of 31.5 percent.
- Historic structures condition: Increased historic structures in good condition on the current LCS to 47.1 percent, exceeding the goal of 45.5 percent.
- Museum collections condition: NPS met 71.5 percent of NPS preservation and protection standards for museum facilities, 0.4 percent short of the 71.9 percent goal. (NPS is currently creating a

- Servicewide Collections Storage Plan. This FY 2006 planning effort will provide a strategy to make substantial improvements in the preservation and protection of park museum collections.)
- Using facility condition standards as an indicator of collection condition, the NPS has 52.2 percent of collections in good condition, exceeding the target by 0.8 percent.
- Using facility condition standards as an indicator of collection condition, NPS exceeded the goal of having 51.4 percent of collections in good condition.

## Other Program Accomplishments:

- Drafted guidance on archeological site condition inspections, specification templates, etc., for data input into FMSS.
- Prepared a Corrective Action Plan (CAP) for Noncompliance Issues identified in the FY 2004 Audited Financial Statement, including completing condition assessments for all archeological sites as heritage assets.
- Stabilized park structures, including six Sandy Hook Nike Missile Barracks Buildings at Gateway NRA, five James Cant Ranch structures at John Day Fossil Beds NM, and the Guthrie-Ogilvie House at Cape Lookout NS.
- Corrected 1,146 planning, environmental, storage, security, and fire protection deficiencies in park
  museum collections. For example, Friendship Hill NHS installed firewalls and fire secure doors in a
  300+ square foot curatorial storage area; Adams NHP installed vapor barriers over dirt floors at John
  Adams and John Quincy Adams Birthplaces to ensure efficiency of dehumidifiers in regulating the
  environment; and Grant-Kohrs Ranch NHS, through an agreement with Rocky Mountain Cooperative
  Ecosystem Studies Unit and Montana State University, produced a training video on Museum
  Integrated Pest Management and received scientific input on its own pest management plan.
- Improved the item-level condition of collections through treatment. For example, Colonial NHP treated
  a rare restored ceramic oven, using fragments from the colonial settlement at Jamestown, to improve
  public interpretation; Gettysburg NMP treated a flag captured during Pickett's Charge; and Natchez
  NHP treated and prepared for exhibit eight court documents associated with William Johnston.
- Assisted 21 parks with complex NAGPRA compliance issues in the context of collections, inadvertent
  discoveries and the disposition of culturally unidentifiable human remains. Several situations,
  including those at Hawaii Volcanoes NP, Dinosaur NM, and Navajo NM, required extensive
  discussions due to difficult issues of cultural affiliation and statutory and regulatory requirements.
  Reviewed or published 13 NAGPRA notices of inventory completion or intent to repatriate.
- Expanded the Network to Freedom by reviewing 64 applications, of which 45 were accepted. The Network to Freedom now includes 244 sites, programs, and facilities with a documented connection to the Underground Railroad, including 22 listings in NPS units, and one National Wildlife Refuge.
- Enhanced NPS partnerships with underserved African American communities, conducting more than 82 site visits, participating in approximately 35 conferences, organizing eight gatherings, and conducting two workshops on documenting Underground Railroad sites for the Network to Freedom.
- In the Vanishing Treasures program, 13 preservation projects resulted in improved conditions for 15 prehistoric and historic structures.

## **Performance Overview**

NOTE: This table does not include any proposed goal and measure changes resulting from the DOI Strategic Plan update now underway. See Performance Summary Tab for details.

| Measure  | 2005 Plan   | 2005 Actual  | Change<br>from 2005<br>Plan                 | 2006<br>Enacted                | 2006<br>Change<br>from 2005 | 2007<br>Request                | 2007<br>Change<br>from 2006 |
|--|---|--|---|--------------------------------|-----------------------------|--------------------------------|-----------------------------|
| % NPS<br>Cultural<br>properties in<br>good<br>condition<br>(SP, BUR<br>Ia5A) | 47.5%<br>(26,541 of<br>55,876)                                | ESTIMATED<br>47.5%<br>(26,541 of<br>55,876)<br>ACTUAL:<br>48.5%<br>(28,966 of<br>59,674) | + 1%  | 48.6%<br>(29,000 of<br>59,674) | + 0.1%                      | 48.7%<br>(29,100 of<br>59,674) | + 0.1%                      |
| % Historic<br>structures in<br>good<br>condition<br>(PART CR-1,<br>BUR Ia5)  | 45.5%   | 47.1%  | + 1.6%                                      | 46%                            | - 1.1%                      | 46.5%                          | + 0.5%                      |
| % NPS<br>Collections in<br>good<br>condition<br>(SP, BUR<br>Ia6A)            | 53.3%<br>(168 of 315)<br>Revised to:<br>51.4%<br>(163 of 317) | 52.2%<br>(167 of 320)  | - 1.3%<br>(+0.8% from<br>revised<br>target) | 54.4%<br>(174 of 320)          | +2.2%                       | 56.6%<br>(181 of 320)          | + 2.2%                      |
| % Museum<br>collections<br>standards<br>met (PART<br>CR-2, BUR<br>Ia6)       | 71.9%   | 71.5%  | -0.4%                                       | 72.4%                          | +0.9%                       | 73.4%                          | + 1%                        |
| Cultural<br>Landscapes<br>in good<br>condition<br>(PART, BUR<br>la7)         | 31.5%   | 36.8%  | + 5.3%                                      | 32%                            | -4.8%                       | 32.5%                          | +0.5%                       |
| Archeologica<br>I Sites in<br>good<br>condition<br>(PART CR-4,<br>BUR Ia8)   | 50%   | 49.8%  | - 0.2%                                      | 51%                            | + 1.2%                      | 52%                            | + 1%                        |

Subactivity: Resource Stewardship Program Component: Resources Protection

## **Justification of 2007 Program Changes**

The 2007 budget request for the Resources Protection is \$48.179 million and 286 FTE, with no program changes requested for FY 2007.

# **Program Overview**

The Resources Protection program of the National Park Service supports DOI's goal, "Protect the Nation's natural, cultural and heritage resources." The NPS actively manages natural and cultural resources in the National Park System to meet its statutory responsibility to preserve these resources unimpaired for future generations. The program supports NPS efforts to improve the health of watersheds, landscapes, and marine and costal resources, and sustain biological communities on the lands and waters in parks, as well as protecting a wide variety of cultural resources. This program relates directly to the accomplishment of NPS bureau specific goals that relate directly to the accomplishment of the Department's goals.

Natural and cultural resources are sometimes threatened by human impacts and uses. Illegal activities such as poaching cause harm to and, in some cases, destruction of the resources for which national parks were established. Natural resources protection is one of the many responsibilities of park law enforcement personnel and of all NPS employees. The protection of resources is accomplished through a program of patrols, investigations, remote surveillance, employee education, public education, improved security and increased interagency cooperation. Preventive measures focus on educating visitors and particularly offenders as to the effects of inappropriate or illegal behavior on irreplaceable resources. Similarly, educating NPS employees and visitors about the impact of their work habits and behavior on the quality of resources provides effective preventive protection and helps them recognize illegal activities.

There is a significant illegal trade in wildlife and plant parts from National Park areas. Wildlife and plants are taken illegally for different reasons, often for personal consumption or for the sale of body parts to local or international commercial markets. The illegal removal of wildlife from the parks is suspected to be a factor in the decline of numerous species of wildlife, and could cause the extirpation of many more from the parks. In addition, several species of wildlife federally listed as threatened or endangered are being killed or removed from units of the National Park Service.

#### Federally Listed Threatened and Endangered Species Poached in National Parks

| Endangered                   | Threatened                |
|------------------------------|---------------------------|
| Hawksbill sea turtle         | Bald eagle                |
| California brown pelican     | Steller sea lion          |
| Schaus swallowtail butterfly | Grizzly bear              |
| Wright's fishhook cactus     | Northern spotted owl      |
|                              | Greenback cutthroat trout |
|                              | Green sea turtle          |
|                              | Loggerhead sea turtle     |
|                              | Desert tortoise           |

### Why Animals Are Poached

| Animal         | <b>Commercial Product</b> | Use                | Where Traded           |  |
|----------------|---------------------------|--------------------|------------------------|--|
| Bear           | Gall Bladders             | Medicinal Purposes | International          |  |
|                | Paws                      | Medicinal Purposes | International          |  |
| Elk            | Antlers                   | Medicinal Purposes | Asia                   |  |
| Yellow-Crowned | Meat                      | Food               | National/International |  |
| Night-Herons   |                           |                    |                        |  |
| Raptors        | Animal                    | Falconry           | National/International |  |
| Snakes         | Skins                     | Fashion            | National/International |  |
|                | Animal                    | Pets               | National/International |  |
| Paddlefish     | Caviar                    | Food               | National/International |  |

Archaeological Resource Crimes. In calendar year 2004, NPS documented 372 violations where archeological or paleontological resources were damaged or destroyed (most recent data available). Damage was reported by a variety of sites, including: ancient and historic archeological sites that included burials, tools, pottery, and baskets associated with historic and prehistoric subsistence and village sites; ceremonial sites; and shipwrecks and associated artifacts. The Archeological Resource Protection Act (ARPA), the Antiquities Act and the Native American Graves Protection and Repatriation Act (NAGPRA) provide a statutory basis for the protection of archeological sites and cultural resources in parks. Regular monitoring and law enforcement activities reduce and inhibit looting and depredation of the resources. ARPA funds that are distributed to the parks have resulted in criminal prosecutions as well as increased site protection throughout the NPS. NPS plans to continue these investigative efforts and to support additional multi-agency investigations. Some funds will be spent on increased training of investigative, resource protection, and archeological staff and to support monitoring and long-term investigations in areas where past activities have shown that looting and theft are still occurring and may be increasing.

**Environmental Crimes.** The natural environment within and immediately adjacent to national park areas is the subject of growing concern from past and present environmental crimes and clean water issues. Urban sprawl threatens to increase these types of offenses. Threats have expanded from the dumping of residential trash to include the industrial dumping of solvents, asbestos, and other toxic materials in remote areas around and within the parks. In addition, remote areas of parks are now being used to cultivate large gardens of marijuana. Illegal Mexican drug trafficking organizations are setting up complex operations with live-in garden tenders. Pristine land is being impacted with the destruction of native plants and animals. The introduction of chemicals and pesticides as well as the impacts of long-term human habitation is devastating to park resources. The NPS has increased the level of investigation directed towards these crimes, and has dedicated educational programs for both park visitors and neighbors to combat the presence and effect of environmental crimes.

Alaska Subsistence. Within the State of Alaska, the NPS has a unique responsibility for resources protection as mandated by the Alaska National Interest Lands Conservation Act (ANILCA) of 1980. The Act contains provisions that prioritize consumptive uses of fish and wildlife for rural residents of the State of Alaska. Federal agencies are now charged with implementing the subsistence provisions on public lands as required by ANILCA. The NPS is responsible for monitoring the taking of consumptive resources on parklands. Priority over all other consumptive uses is based upon local rural residency, availability of alternative resources, and a customary and direct dependence upon the fish and wildlife populations as the mainstay of livelihood. Minimal ANILCA requirements consist of protecting fish and wildlife resources on Federal public lands; studies to document subsistence use by area and species; development of management plans, policies and regulations for subsistence seasons and bag limits; and creation of an extensive public information/awareness system.

NPS will continue to provide for support to park and monument Subsistence Resource Commissions, participation in Regional Advisory Council meetings, and greater involvement with local partners in conducting field-based resource monitoring projects. Participation in these activities is essential to ensure

that the natural and cultural resources and associated values of the Alaska parks are protected, restored and maintained in good condition and managed within their broader context.

**Natural Resource Protection Projects.** To develop innovative approaches that address the complex threats to natural resources in national parks, the Resource Protection Fund was established to fund a series of competitively selected projects. The projects funded in 2005 were diverse, both in their locations and in the threats addressed. These projects included protecting bears and visitors in Alaska gateway communities at Klondike Goldrush NHS; understanding and changing the behavior of visitors who remove petrified wood from Petrified Forest NP; and expanding the investigative analysis techniques developed at Shenandoah NP for theft of native plants to other parks in neighboring NPS regions.

## **FY 2007 Program Performance Estimates**

- Continue efforts on the southwestern border and in Californian parks involving drug seizures and the
  detention and arrest of undocumented immigrants along the border; pervasive drug traffic, illegal
  immigration, human trafficking, and large scale marijuana cultivation in the backcountry that results in
  resource damage in the form of destroyed vegetation, introduction of chemicals and pesticides, new
  trails, litter, and human waste.
- Provide technical assistance for government attorneys and law enforcement seeking information regarding cultural resource protection.
- Conduct NAGPRA civil penalties investigations resulting in compliance with Federal law.
- Provide training for NPS park and field archeologists in Archeological Resource Value Assessment, a crucial part of casework for prosecutions under ARPA.
- Collect, analyze, and utilize in briefing statements and information provided to public inquiries, governmentwide information on the reported numbers of archeological looting or vandalism incidents, citations or other punishments of looters, and other related information.
- Parks have targeted 65.1% of wilderness lands to meet wilderness character objectives by the end of FY 2007.
- Parks have targeted 63% of wild and scenic rivers within park boundaries and managed by the parks, to meet resource objectives.

## **FY 2006 Planned Program Performance**

- Conduct significant ARPA and Antiquities Act investigations resulting in successful indictments.
- Continue shift of resources and emphasis to address priority law enforcement for border parks, and those with serious officer safety concerns.
- Continue to monitor archeological site locations, in particular those susceptible to looting and vandalism.
- Continue investigative and routine patrol activities to protect cultural and natural resources at park units.
- Produce a technical bulletin on Archeological Value Assessments methods and techniques and distribute widely using Archeology Program website.
- Continue to provide training in archeological resources protection topics for NPS and other agency field archeological and law enforcement staff.
- Update background information from NPS and other land-managing agencies on the incidents of archeological looting and vandalism, law enforcement activities in response to these incidents, and related activities.
- Parks have targeted 65% of wilderness lands to meet wilderness character objectives by the end of FY 2007.
- Parks have targeted 60% of wild and scenic rivers within park boundaries and managed by the parks to meet resource objectives.

#### FY 2005 Program Performance Accomplishments

 On the Blue Ridge Parkway, five marijuana gardens containing over 9,000 marijuana plants valued at \$9 million dollars were seized and eradicated.

- The National Park Service uses an annual report on law enforcement activities within the parks, which includes data on resource crimes as its baseline document. Since this document, the Annual Law Enforcement Statistical Report, is based on the calendar year, the final figures and analysis are not available at this time. Preliminary figures indicate that ARPA and drug indictments and convictions continue to rise Servicewide. Additional funding and focus has led to a major increase in southwestern border and CA park drug seizures and the detention and arrest of hundreds of undocumented immigrants along the border; pervasive drug traffic, illegal immigration, human trafficking, and large scale marijuana cultivation in the backcountry result in resource damage in the form of destroyed vegetation, introduction of chemicals and pesticides, new trails, litter, and human waste.
- Provided technical assistance through law enforcement specialist contractor for government attorneys and law enforcement seeking information regarding archeological resource protection.
- Developed a database for the Listing of Outlaw Treachery (LOOT) files on archeological resource protection prosecution cases and completed the migration of 570 of 685 records for the existing files.
- Provided training for seven NPS park and field archeologists in Archeological Resource Value Assessment, a crucial part of casework for prosecutions under ARPA.
- Collected, analyzed, and utilized in briefing statements and information provided to public inquiries, governmentwide information on the reported numbers of archeological looting or vandalism incidents, citations or other punishments of looters, and other related information.
- 64.9% of wilderness lands met wilderness character objectives.
- 55% of wild and scenic rivers within park boundaries and managed by the parks met resource objectives.

#### **Performance Overview**

| Measure   | 2005 Plan            | 2005 Actual | Change<br>from 2005<br>Plan | 2006<br>Enacted | 2006<br>Change<br>from 2005 | 2007<br>Request | 2007<br>Change<br>from 2006 |
|---|----------------------|-------------|-----------------------------|-----------------|-----------------------------|-----------------|-----------------------------|
| Also see<br>goals under<br>Natural and<br>Cultural<br>Resources<br>Management     |                      |             |                             |                 |                             |                 |                             |
| % of<br>wilderness<br>meeting<br>wilderness<br>objectives<br>(SP, BUR<br>la10)    | Establish<br>targets | 64.9%       | Not<br>applicable           | 65%             | + 0.1%                      | 65.1%           | + 0.1%                      |
| % of special<br>management<br>areas<br>meeting<br>objectives<br>(SP, Bur<br>Ib4B) | No Target            | 55%         | Not<br>applicable           | 60%             | + 5%                        | 63%             | + 3%                        |

| National Park Service | FY 2007 Budget Justifications   |
|-----------------------|---------------------------------|
|                       | All dollar amounts in thousands |
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